

#93

# DESCRIPTION OF MANUFACTURE



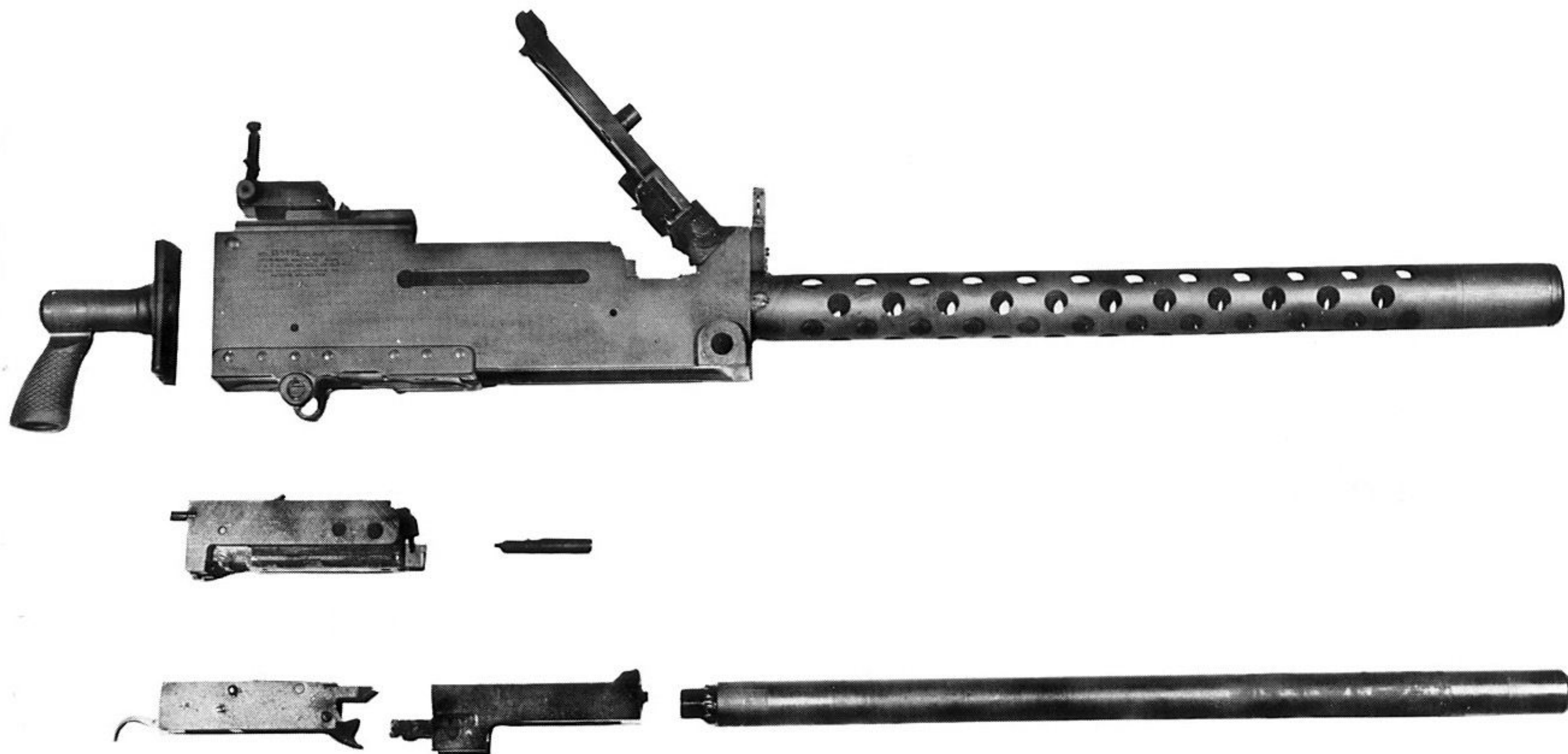
ITEM: GUN, BROWNING MACHINE, CAL. .30, M1919A4 (FLEX)

VOLUME 1 OF 1

CONTENTS: GENERAL INFORMATION AND COMPLETE SET OF  
~~ROUTE SHEETS~~ AND DRAWINGS

DATE NOVEMBER 1949





720-10518

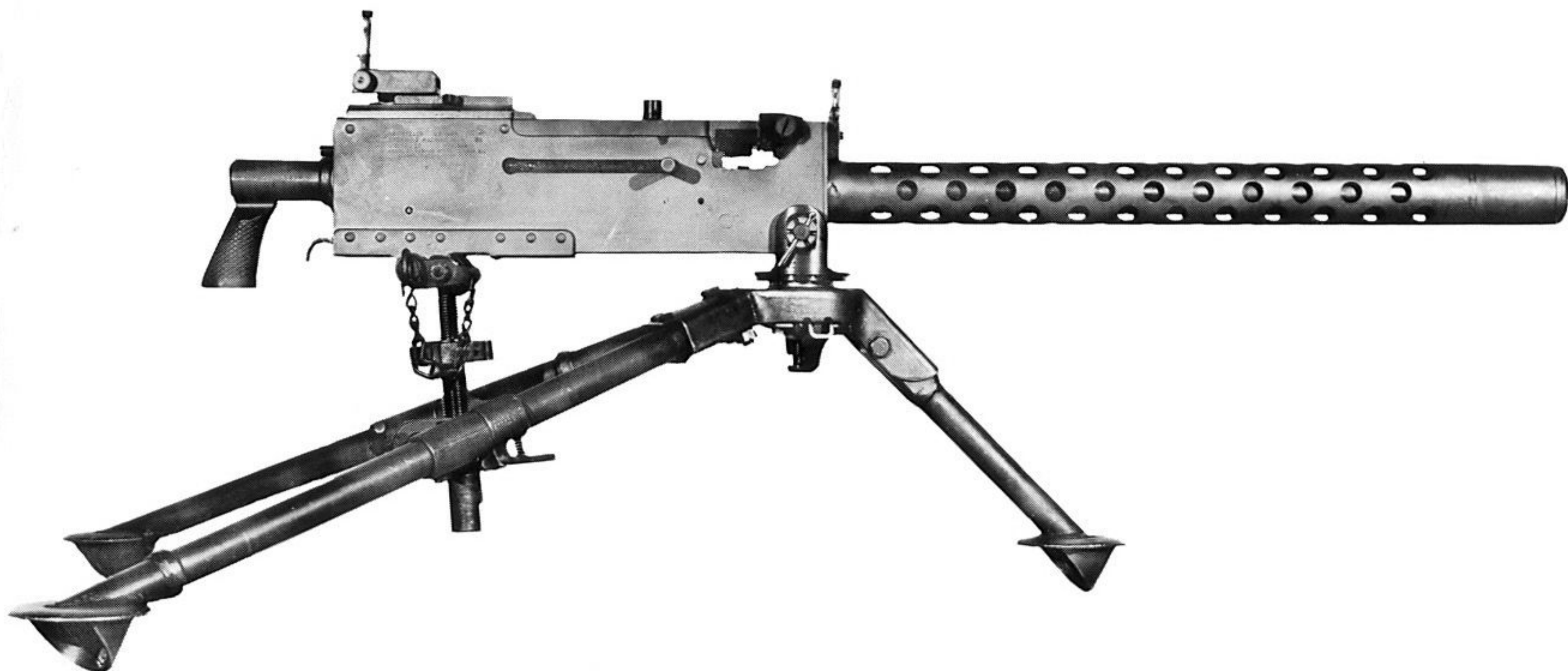
May 18, 1944

ROCK ISLAND ARSENAL

ORDNANCE DEPARTMENT

Browning Machine Gun, Cal..30, M1919A4. Flexible, with principal components.





720-10521

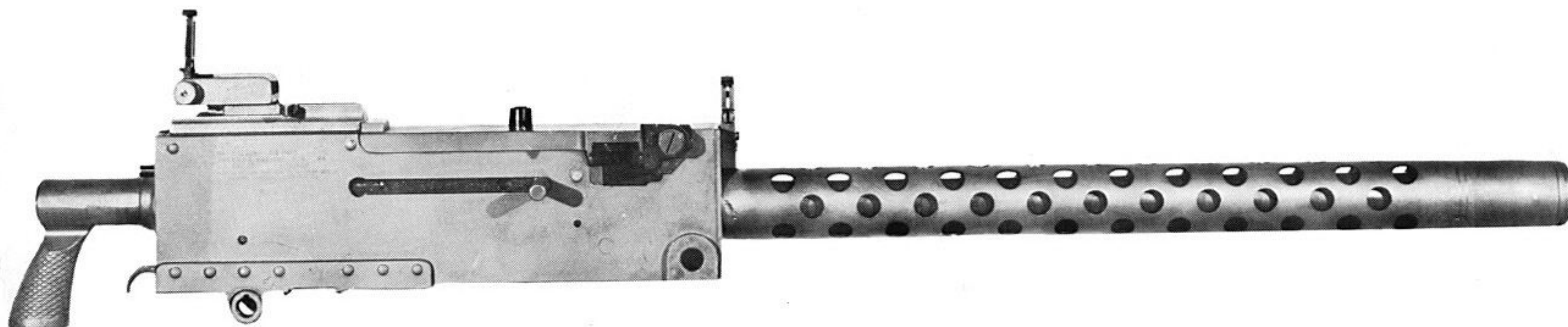
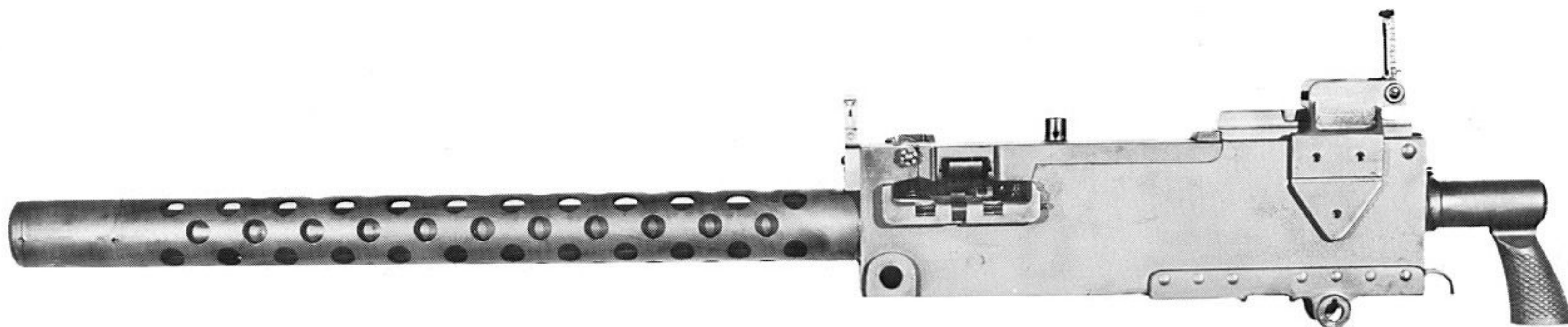
May 18, 1944

ROCK ISLAND ARSENAL

ORDNANCE DEPARTMENT

Browning Machine Gun, Cal..30, M1919A4 on Mount, Tripod, Cal..30, M2.





720-10519

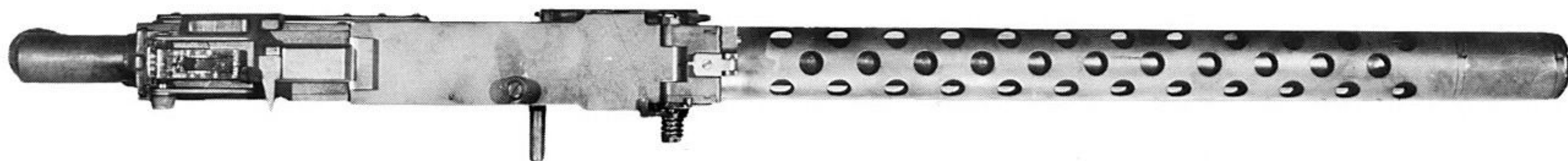
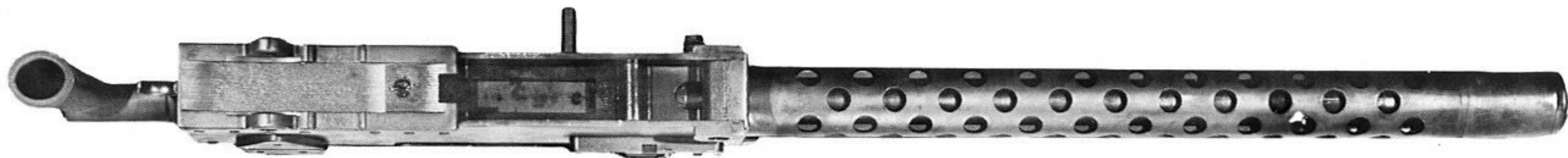
May 18, 1944

ROCK ISLAND ARSENAL

ORDNANCE DEPARTMENT

Browning Machine Gun, Cal..30, M1919A4. Right and left side.





720-10520

May 18, 1944

ROCK ISLAND ARSENAL

ORDNANCE DEPARTMENT

Browning Machine Gun, Cal..30, M1919A4. Top and bottom.



LINE NUMBER	TITLE	DRAWING NUMBER	DRAWING NUMBER	DRAWING NUMBER	DRAWING NUMBER	DRAWING NUMBER	DRAWING NUMBER	DRAWING NUMBER
1	LIST OF DRAWINGS AND SPECIFICATIONS	51-84-1	D5508476	C64321	B6008509	A5005363	A5186283	BBFXI
2	RIGHT SIDE VIEW	51-84-2	D6508259	C5508452	B6008822	A9374	A5186284	BCLXI
3	PLAN VIEW	51-84-3	D6528106	C5508461	B6008823	A5013154	A5238204	BCLX3
4	LONGITUDINAL SECTION	51-84-4	D6535233	C5508462	B6008824	A5013155	A6008825	BEAXI
5	SECTIONAL VIEWS	51-84-5	D6535234	C5508467	B6017462	A5013157	A6147225	BEAX4
6			D6535236	C5508471	B6017469	A5013157	A7106092	BFAXI
7	COMBINED LIST OF ALL PARTS, SPARE		D6535392	C5508472	B6017485	A5013162	A7106069	BFDXI
8	PARTS, EQUIPMENT AND TOOLS	C7122999	D6535393	C5545961	B6017494	A5013166	A7106070	URAX6
9		SHEETS 1-15	D6535408	C5545965	B6017497	A5013167	A7110440	
10			D6535410	C5562503	B6017503		A7123315	
11	LIST OF ALTERNATIVE MATERIALS	B6221040	D6535411	C5564132	B6017508	A20498	A7133164	
12		SHEETS 1-17	D6544087	C5564133	B6017509		A7133165	
13			D7116476	C5564137	B6017511	A135255	A7162630	
14	MATERIAL SPECIFICATIONS	B647588		C5564142	B6017513		A7162631	
15		B647588A		C5563469	B6110312		A7162632	
16		B647588B		C7106872	B6131258	A5013249	A7162633	
17		B647588C			B6131317	A5013258	A5013700	
18					B6134059	A5020490	A5020615	
19	PART NUMBER INSTRUCTIONS	B6169913			B6144237	A5020491	A5163397	
20					B6147212	A5020503	A5163398	
21	FINDING DIAGRAMS				B6147214	A5020505		
22					B6147216	A5020509		
23	CASING ASSEMBLY	D6535358			B6147217			
24	FRAME, LOCK, ASSEMBLY	D5509182			B6147224			
25					B6147228	A5020513		
26					B6147229	A5020514		
27	FRAME, LOCK, R.H., ASSEMBLY	C5509180			B6147230	A5020520		
28	FRAME, LOCK, L.H., ASSEMBLY	C5509181			B6147231	A5020522		
29	PIN, FIRING, ASSEMBLY	C5509186			B6212654	A5020527		
30	COVER, BELT FEED, ASSEMBLY	C5509801			B6221301	A5020530		
31	LEAF, REAR SIGHT, ASSEMBLY	C5545964			B6261101	A5020562		
32	COVER, ASSEMBLY	C5564096			B7162248	A5020567		
33	EXTENSION, BARREL, ASSEMBLY	C5564139				A5020570		
34	PLATE, SIDE, L.H., ASSEMBLY	C5564222				A5020577		
35	PLATE, SIDE, R.H., ASSEMBLY	C5564224				A5020581		
36	SIGHT, REAR GROUP, ASSEMBLY	C5564906				A5020589		
37	EXTRACTOR, ASSEMBLY	C5621076				A5020600		
38	PLATE, BACK W/BUFFER, ASSEMBLY	C7100059				A5020601		
39						A5020627		
40						A5020711		
41	CATCH, COVER	B6008757				A5024602		
42	PIVOT, BELT FEED LEVER, GROUP ASSEMBLY	B6110529				A5024603		
43	PLUNGER, BARREL, ASSEMBLY	B6131251				A5024605		
44	PIN, ASSEMBLY	B6131253				A5135051		
45	PIN, BELT FEED PAWL, ASSEMBLY	B6131255				A5135052		
46	SLIDE, FEED, BELT, ASSEMBLY	B6131262				A5135053		
47	SPRING, SEAR, ASSEMBLY	B6131265				A5135057		
48	BLOCK, TRUNNION, ASSEMBLY	B6147093				A5139969		
49	ROD, DRIVING SPRING, ASSEMBLY	B6147222				A5152429		
50	BOLT, ASSEMBLY	B6147299				A5152430		
51	LATCH, ASSEMBLY	B7106949				A5152432		
52	SIGHT, BRACKET, GROUP ASSEMBLY	B7132923				A5152737		
53	POST, FRONT SIGHT, ASSEMBLY	B7162616				A5156881		
54						A5156882		
55						A5156883		
56	PACKING AND MARKING DRAWINGS					A5156884		
57	BOX, PACKING (FOR TWO BMG, CAL 30, M1919A4 FLEX)	PS-12				A5157374		
58	BOX, PACKING (SPARE BARRELS)	PS-14				A5157434		
59	PACKING INSTRUCTIONS FOR ESSENTIAL					A5159870		
60	EXTRA PARTS	PS-55				A5160461		
61	CLEANING, PRESERVING & PACKAGING					A5160656		
62	FOR SMALL ARMS SPARE PARTS	PS-100				A5162810		
63	BOX, PACKING (FOR ONE BMG, CAL 30, M1919A4 FLEX)	PS-159				A5170491		

SUPERSEDES 51-84-1A W/C 8-19-48

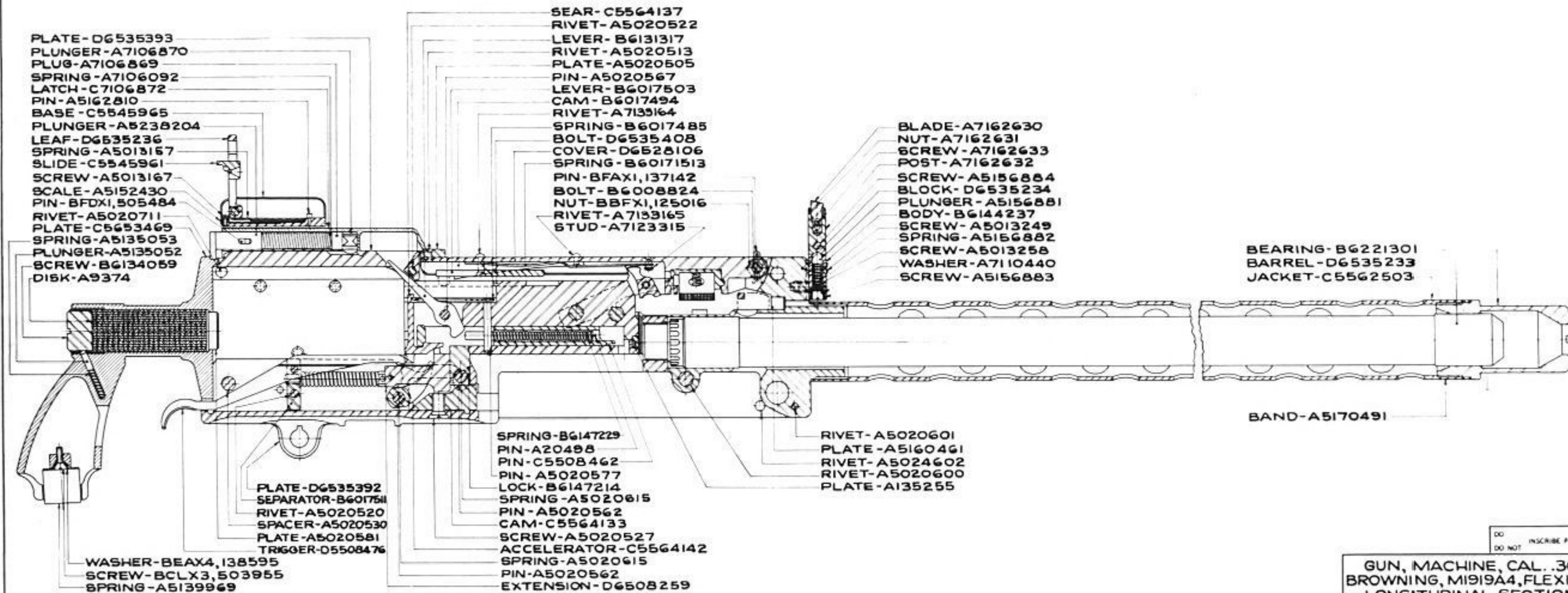
LINE NUMBER	LIST OF SPECIFICATIONS	SPEC NUMBER
1	GUNS, MACHINE, BROWNING, CAL. 30, M1919A4 & M1919A5	52-6-1
2	COMPOUND RUST PREVENTIVE, LIGHT	2-84
3	FIBER, RED, (SHEET)	52-7-11
4	FINISHES, PROTECTIVE, FOR IRON AND STEEL PARTS	57-0-2
5	FORGINGS, LIGHT, DROP AND MISCELLANEOUS	57-105
6	IRON, MALLEABLE, PEARLITIC, CASTINGS	AXS-623
7	MANUFACTURE AND INSPECTION OF SA WEAPONS, & ACC.	52-0-1
8	METALS, GENERAL SPECIFICATION FOR INSPECTION OF	QQ-M-151
9	OIL, LUBRICATING, LIGHT	2-27
10	PACKAGING AND PACKING FOR OVERSEAS SHIPMENT,	
11	GENERAL SPECIFICATION	JAN-P-100
12	STANDARD SPECIFICATION FOR MARKING SHIPMENTS	
13	BY CONTRACTORS	100-2
14	STEEL, BARS AND BLANKS (FOR SMALL ARMS GUN BARRELS)	57-107-25
15	STEEL, CARBON AND ALLOY, BARS	QQ-5-671
16	STEEL, CARBON AND ALLOY, PLATE	57-121
17	STEEL, CARBON AND ALLOY, SHEETS AND STRIPS	57-136
18	STEEL, PLATES, SHAPES, SHEETS, STRIPS AND	
19	RECTANGULAR BARS FOR WELDED STRUCTURES	57-114-1
20	STEEL, TOOL, CARBON, ALLOY AND HIGH SPEED	57-108
21	TUBING, ROUND, MECHANICAL AND STRUCTURAL, STEEL,	
22	CARBON AND ALLOY, SEAMLESS, WELDED AND	
23	BRAZED	57-180
24	WIRE, STEEL, SPRING, FOR SMALL ARMS WEAPONS	48-7-1
25		

NOTE:  
 \* NOT REQUIRED WHEN ALTERNATIVE METHOD OF MANUFACTURE OF B6144237 IS USED  
 \* ALTERNATIVE METHOD OF MANUFACTURE

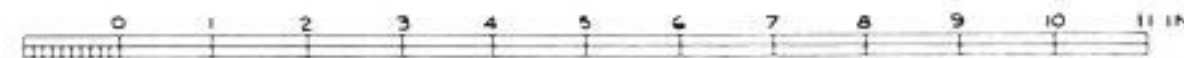
DO INSCRIBE PART NO	
DO NOT	
GUN, MACHINE, CAL. 30 BROWNING, M1919A4 (FLEXIBLE) LIST OF DRAWINGS & SPECIFICATIONS	
SEPTEMBER 30, 1936	CLASS DIVISION DRAWING FILE
51 84 1	
57-19-48	
58-21-49	
59-11-49	
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED	
DECIMAL ± —	
FRACTIONAL ± —	
ANGULAR ± —	
C.F.I.	Z.C.
SUBMITTED:	
EXAMINED:	
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE	
ORDNANCE DEPT. U.S.A.	

D

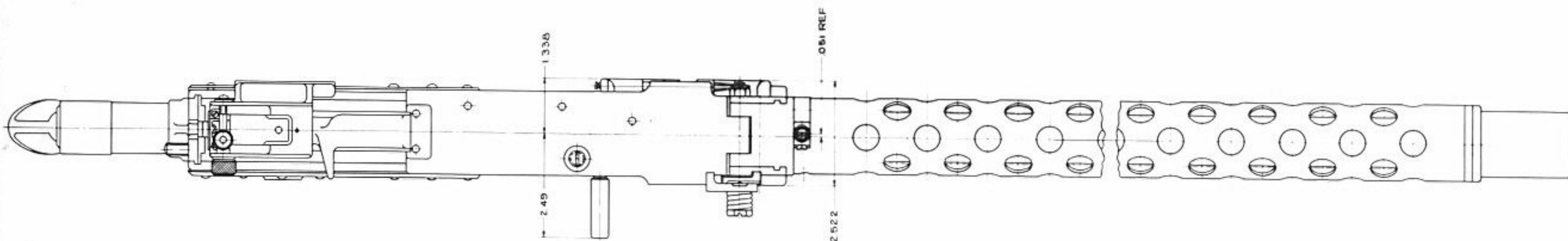




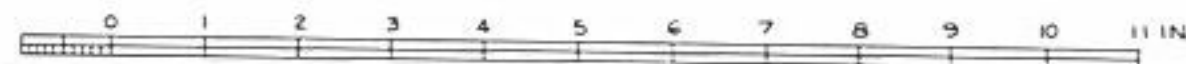
SUPERSEDES 51-84-3 WO/C 8-19-48



DO NOT INSCRIBE PART NO.	
GUN, MACHINE, CAL. .30 BROWNING, M1919A4, FLEXIBLE LONGITUDINAL SECTION	
SEPTEMBER 30, 1936	CLASS DIVISION DRAWING FILE
REVISIONS	51 84 4
31 8-19-48	
32 6-21-49	
33 11-15-49	
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL: ± FRACTIONAL: ± ANGULAR: ±	
DESIGNED BY J J V	CHECKED BY Z C
SUBMITTED: <i>[Signature]</i>	
EXAMINED: <i>[Signature]</i>	
APPROVED BY THE CHIEF OF ORDNANCE <i>[Signature]</i>	
ORDNANCE DEPT., U.S.A. MADE AT ROCK ISLAND ARSENAL	



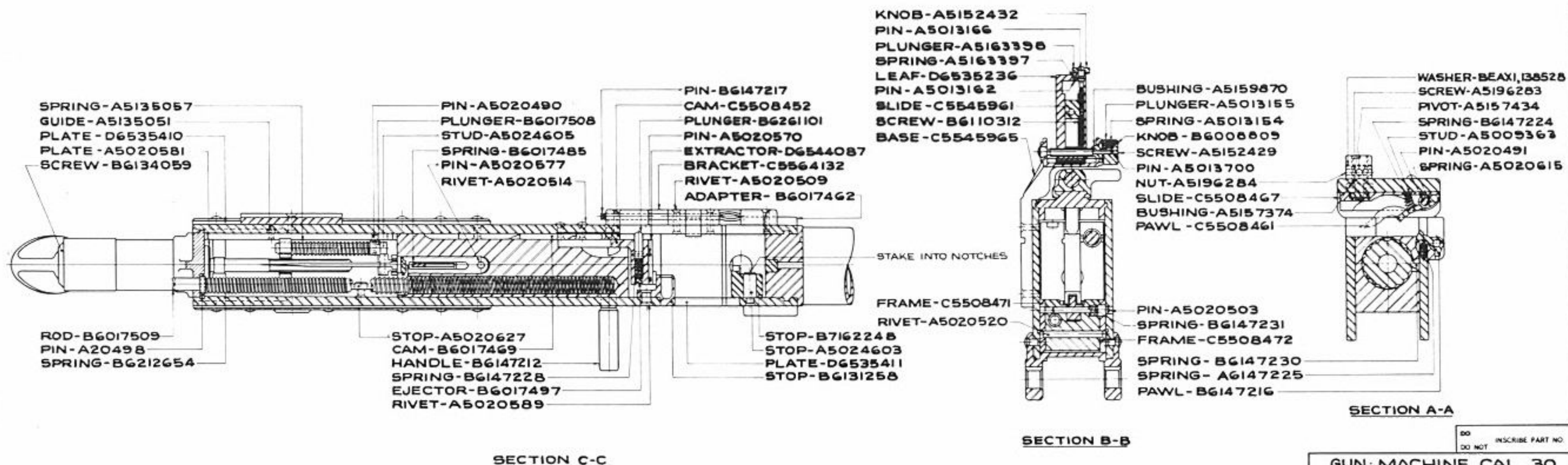
SUPERSEDES 51-84-2 WO/C 8-19-48



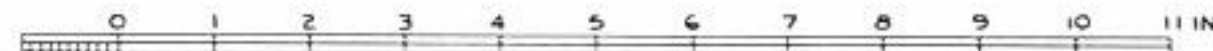
DO NOT INSCRIBE PART NO.			
GUN, MACHINE, CAL. 30 BROWNING, M1919A4, FLEXIBLE PLAN VIEW			
SEPTEMBER 30, 1934	CLASS	DIVISION	FILE
REVISIONS	51	84	3
14-19-48	TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL 2 FRACTIONAL 2 ANGULAR 2		
	C.T.J.	Z.C.	L.S. DEPT. U.S.A.
			L.S. DEPT. U.S.A.
DRG. PERTAINS TO 51-84-1 30 BUS M1919A4		SUBMITTED: H.H. Roe	
		EXAMINED: H.H. Roe	
		APPROVED BY ORDER OF THE CHIEF OF ORDNANCE D.B. Brown	
		COL. ORDN. DEPT. U.S.A.	
D		ORDNANCE DEPT. U.S.A. MADE AT ROCK ISLAND ARSENAL	



		DO NOT INSCRIBE PART NO.	
<p align="center"><b>GUN, MACHINE, CAL. 30</b>  <b>BROWNING, M1919A4 FLEXIBLE</b>  <b>RIGHT SIDE VIEW</b></p>			
SEPTEMBER 30, 1936		CLASS	DIVISION
REVISIONS 22 8-19-40 23 8-21-40		51	84
			2
		TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL $\pm$ _____ FRACTIONAL $\pm$ _____ ANGULAR $\pm$ _____	
		MFG. TRACER C.F.J.	U.S. MFG. TRACER Z.C.
		U.S. TRACER 40 100	CHIEF MFG. TRACER 50
DRG. PERTAINS TO 51-84-1 35 BULK M1919A4 (1/10)		SUBMITTED: <i>H.H. Roe</i>	
		EXAMINED: <i>Walter Ackerman</i>	
		ORG. DEPT. U.S.A. APPROVED BY ORDER OF THE CHIEF OF ORDNANCE: <i>W.H. Bannan</i> S.D. ORG. DEPT. U.S.A.	
D		ORDNANCE DEPT. U.S.A. NAME OF BULK PLANT APPROVED	



SUPERSEDES 51-84-4 WO/C 8-19-48



DO INSCRIBE PART NO.		DO NOT	
GUN, MACHINE, CAL. .30 BROWNING, M1919A4 FLEXIBLE SECTIONAL VIEWS			
SEPTEMBER 30, 1936	CLASS	DIVISION	DRAWING FILE
REVISIONS	51	84	5
19 8-13-48			
20 6-21-49			
21 11-15-49			
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL 1 — FRACTIONAL 2 — ANGULAR 2 —			
DESIGNED P.J.R.	TRACED Z.C.	CHECKED Z.C.	DATE SHIPPED
SUBMITTED: <i>H.H. H.</i>			
EXAMINED: <i>Walter Anderson</i>			
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE <i>Walter Anderson</i>			
ORD. DEPT. U.S.A.			
ORDNANCE DEPT. U.S.A.			
D			



A 5020520

APRIL 4, 1927

REVISIONS

12 5-10-48

DRG. PERTAINS TO

D5509182

.30 BMG  
 M 17A1 (WC)  
 M 19A4 (FXD)  
 M 19A4 (FLEX)  
 M 19A5 (FXD)  
 M 19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
 NOT OTHERWISE SPECIFIED

DECIMAL  $\pm .005$ FRACTIONAL  $\pm \frac{1}{16}$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

W.C.O.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

L.S.C.

CHIEF DRAFTSMAN

SUBMITTED:

A. W. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
 OF ORDNANCE:

Walter Ackerman  
 ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

Y. P.

RED.

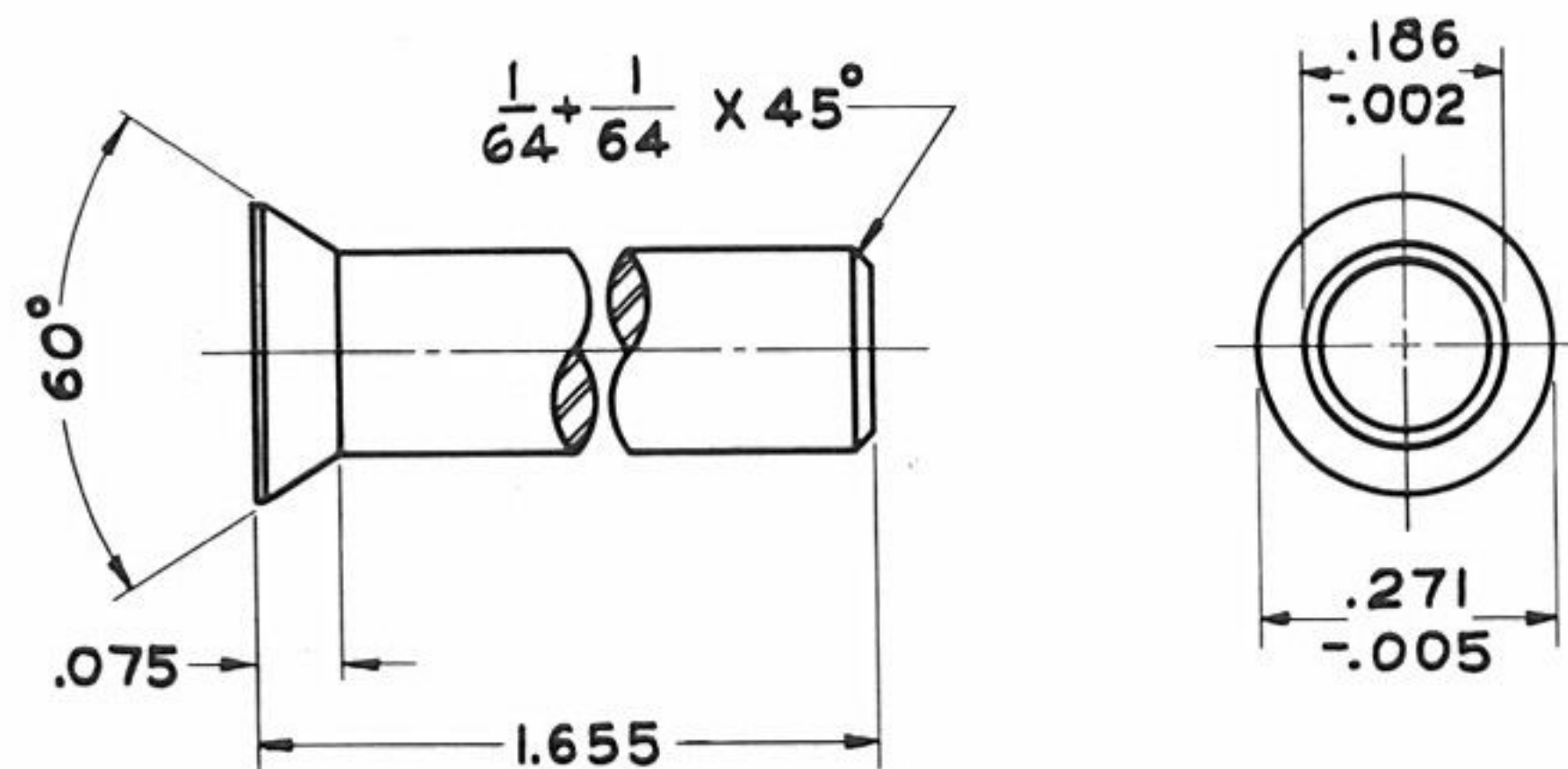
SCL.

T. S.

BR.

EL. 2

ROCK



**RIVET**  
**STEEL FS X1335**  
**FINISH 125/**

5020520

WAS A 20520

SCALE  $\frac{4}{1}$ 

A

5020520

A 5020567

JUNE 1, 1931

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

C45-52

## REVISIONS

12 5-10-48

## DRG. PERTAINS TO

51-114-4

.30 BMG  
M19A5(FXD)

51-125-4

.30 BMG  
M19A6

51-83-4

.30 BMG  
M19A4(FXD)

51-84-4

.30 BMG  
M19A4(FLEX)

51-10-45

.30 BMG  
M17A1(WC)

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm$  —

DRAFTSMAN

W.C.O.

TRACER

A.V.C.

L'D'G DRAFTSMAN

CHECKED

L.S.C.

O.O.

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

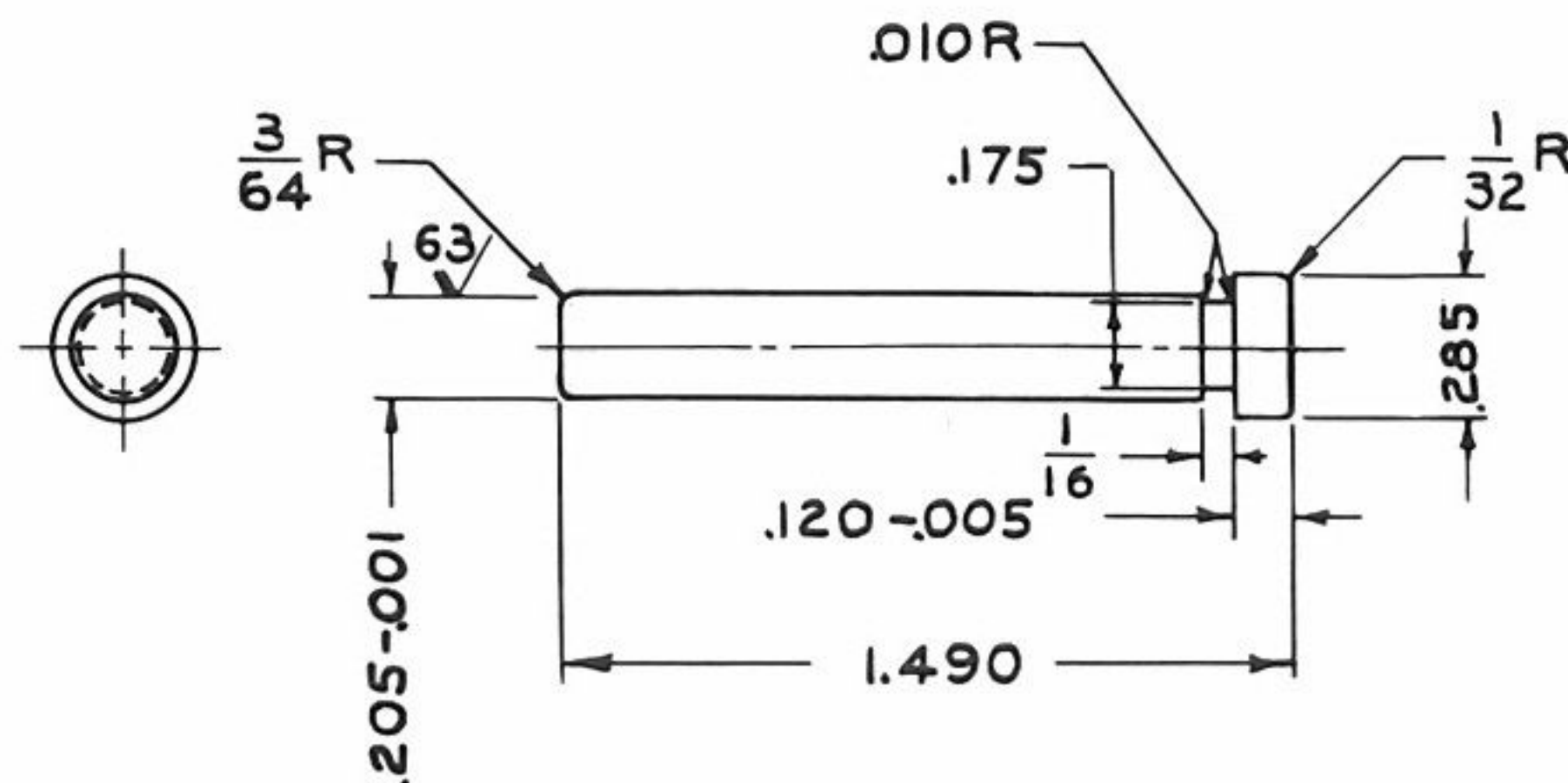
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**PIN, COCKING LEVER****STEEL FS 4140**FINISH  $125/\sqrt{}$ , OTHER SURFACES, AS SPECIFIED

(5020567)

WAS A20567

SCALE  $\frac{2}{1}$ 

A 5020567



A 5135057

JUNE 1, 1931

REVISIONS

18 5-10-48

DRG. PERTAINS TO

51-83-5

.30 BMG  
M19A4 (FXD)

51-84-5

.30 BMG  
M19A4 (FLEX)

51-114-5

.30 BMG  
M19A5 (FXD)

51-125-5

.30 BMG  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL : —  
FRACTIONAL : —  
ANGULAR : —

DRAFTSMAN

W.L.M.

TRACER

M.C.

L'D'G DRAFTSMAN

CHECKER

C.H.C.  
EWR

0.0

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

HEAT TREATMENT &amp; FINAL FINISH

DRAW AT 450° F  
TYPE I FINISH, CLASS OSC  
BAKE ONE HOUR AT 300-350° F

PHYSICAL PROPERTIES

Y. P.

RED.

SCL.

T. S.

BR.

EL 2

ROCK

DIAMETER OF WIRE \_\_\_\_\_

.047

TOTAL NUMBER OF COILS \_\_\_\_\_

24

MINIMUM INSIDE DIAMETER, FREE \_\_\_\_\_

.290

OUTSIDE DIAMETER, FREE \_\_\_\_\_

.387 ± .005

MAX. OUTSIDE DIA AT MIN. OPERATING HEIGHT \_\_\_\_\_

.402

FREE LENGTH \_\_\_\_\_

3.56 APPROX

TYPE OF ENDS \_\_\_\_\_

SQ ENDS GROUND

WOUND \_\_\_\_\_

R.H.

ASSEMBLED HEIGHT \_\_\_\_\_

1.85

LOAD AT ASSEMBLED HEIGHT \_\_\_\_\_

13.9 ± 1 LB

MINIMUM OPERATING HEIGHT \_\_\_\_\_

1.222

LOAD AT MINIMUM OPERATING HEIGHT \_\_\_\_\_

19 ± 1 LB

LB PER INCH OF SPRING DEFLECTION \_\_\_\_\_

8.1 APPROX

SPRING FUNCTIONS OVER ROD \_\_\_\_\_

.275

CALCULATED MAXIMUM SOLID HEIGHT \_\_\_\_\_

1.128

NOTE: CAUTION: DO NOT COMPRESS SOLID.

0.5% OF SPRINGS WILL BE FATIGUE TESTED  
BETWEEN ASSEMBLED HEIGHT AND MINIMUM  
OPERATING HEIGHT FOR 50,000 CYCLES. THE  
LOAD AT ASSEMBLED HEIGHT, AFTER TESTING,  
SHOULD NOT BE LESS THAN 12.5 LB**SPRING, BARREL, PLUNGER**

SPRING STEEL WIRE WD1085 SPECIAL-CLASS A

5135057

WAS A135057

A 5135057

A5170491

FEB. 17, 1939

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

8 5-10-48

DRG. PERTAINS TO

51-83-4

.30 BMG  
M19A4 (FXD)

51-84-4

.30 BMG  
M19A4 (FLEX)

51-114-4

.30 BMG  
M19A5 (FXD)

51-125-4

.30 BMG  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm$  —

DRAFTSMAN

A.W.R.

TRACER

O.K.

L'D'G DRAFTSMAN

CHECKER

LSC EWR

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

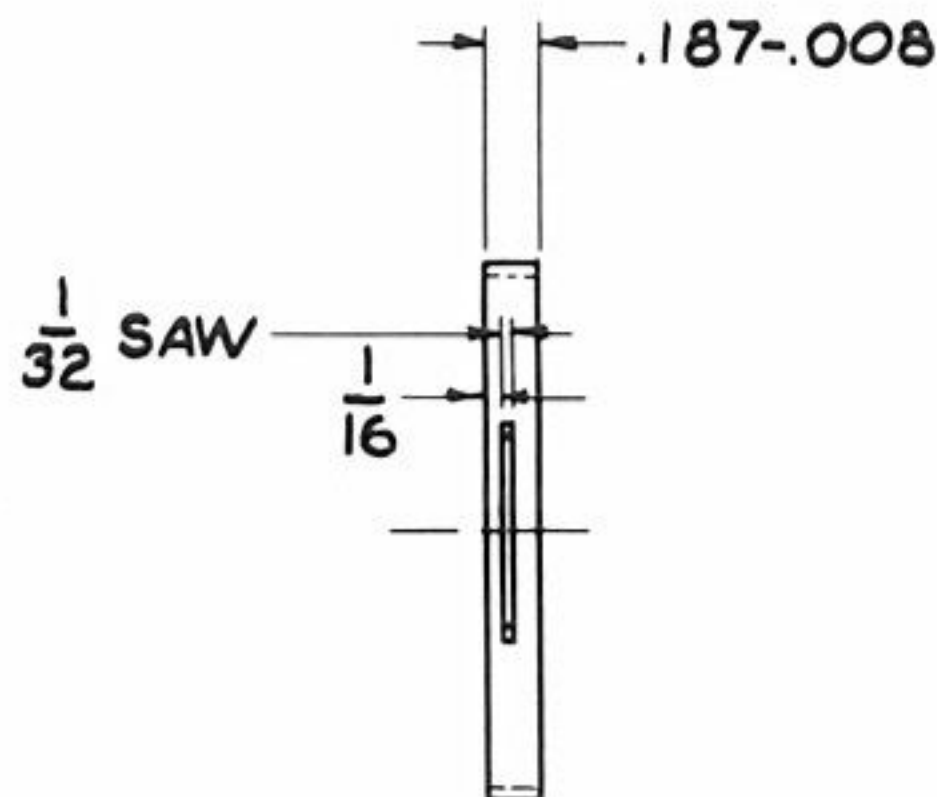
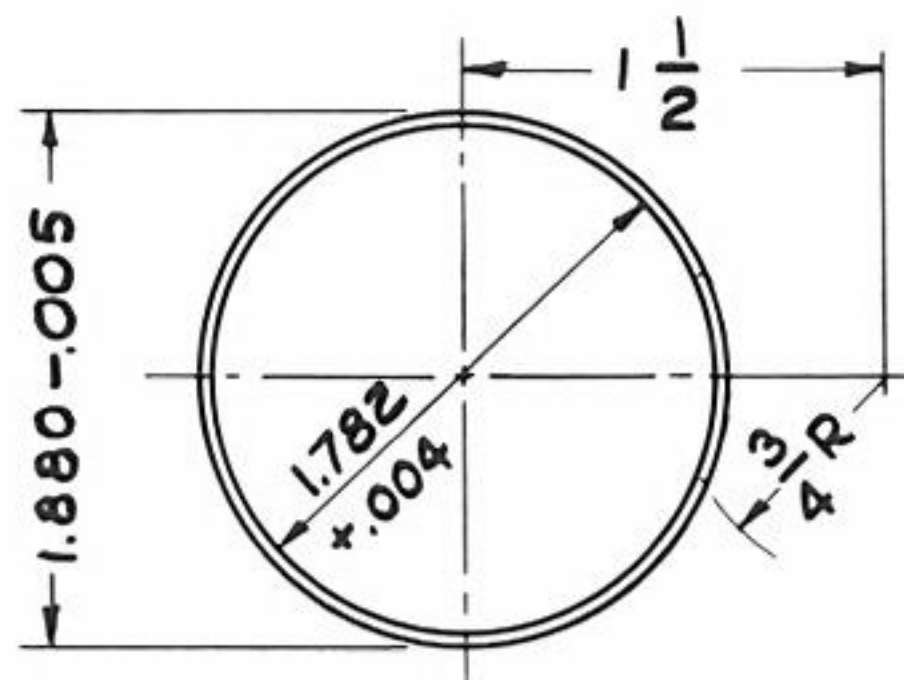
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter G. Gorman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



NOTE:

BREAK ALL SHARP  
EDGES .010**BAND, LOCK, FRONT BARREL BEARING** (5170491)

SEAMLESS STEEL TUBING, WDX 1020

FINISH 125/  
V

WAS A 170491

SCALE  $\frac{1}{1}$ 

A 5170491



A 6147225

FEBRUARY 1, 1938

REVISIONS

10 5-10-48

DRG. PERTAINS TO

51-10-45

.30 BMG  
M17A1(WC)

51-83-5

.30 BMG  
M19A4(FXD)

51-84-5

.30 BMG  
M19A4(FLEX)

51-114-5

.30 BMG  
M19A4(FXD)

51-125-5

.30 BMG  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm$  —FRACTIONAL  $\pm$  —ANGULAR  $\pm$  —

DRAFTSMAN

W.L.M.

TRACER

M. C.

L'D'G DRAFTSMAN

CHECKER

W.H.S.

CHIEF DRAFTSMAN

O.O.

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

HEAT TREATMENT &amp; FINAL FINISH

DRAW AT 450°F.  
TYPE I FINISH, CLASS OSC  
BAKE ONE HOUR AT 300-350°F.

PHYSICAL PROPERTIES

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

DIAMETER OF WIRE .023  
 TOTAL NUMBER OF COILS (APPROX) 13  
 MINIMUM INSIDE DIAMETER, FREE .091  
 MAXIMUM OUTSIDE DIAMETER (SOLID) .15  
 FREE LENGTH (APPROX) .65  
 TYPE OF ENDS SQ & GD  
 WOUND R.H. OR L.H.  
 ASSEMBLED HEIGHT .500  
 LOAD AT ASSEMBLED HEIGHT 3.25  $\pm$  .50 LB  
 MINIMUM OPERATING HEIGHT .360  
 LOAD AT MINIMUM OPERATING HEIGHT 6.25  $\pm$  .50 LB  
 MAXIMUM SOLID HEIGHT .310

## NOTE:

.5% OF SPRINGS WILL BE FATIGUE TESTED  
 BETWEEN ASSEMBLED HEIGHT AND MINIMUM  
 OPERATING HEIGHT FOR 25,000 CYCLES. THE  
 LOAD AT ASSEMBLED HEIGHT, AFTER TESTING,  
 SHOULD NOT BE LESS THAN 2. LB

**SPRING, BELT HOLDING PAWL**  
 SPRING STEEL WIRE WD1085 SPECIAL - CLASS A

6147225

WAS B147225

A 6147225

HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS BPHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	C45-52
SCL.	

APRIL 4, 1927

REVISIONS

9 5-10-48

DRG. PERTAINS TO

B6147222	.30 BMG
	M17A1 (WC)
	M19A4 (FXD)
	M19A4 (FLEX)
	M19A5 (FXD)
	M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm$  —  
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 5^\circ$

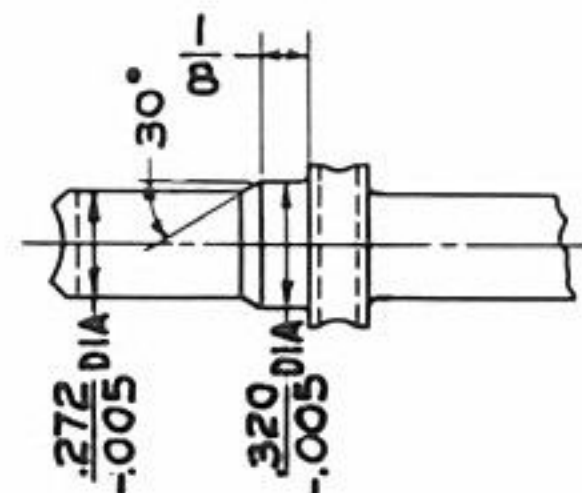
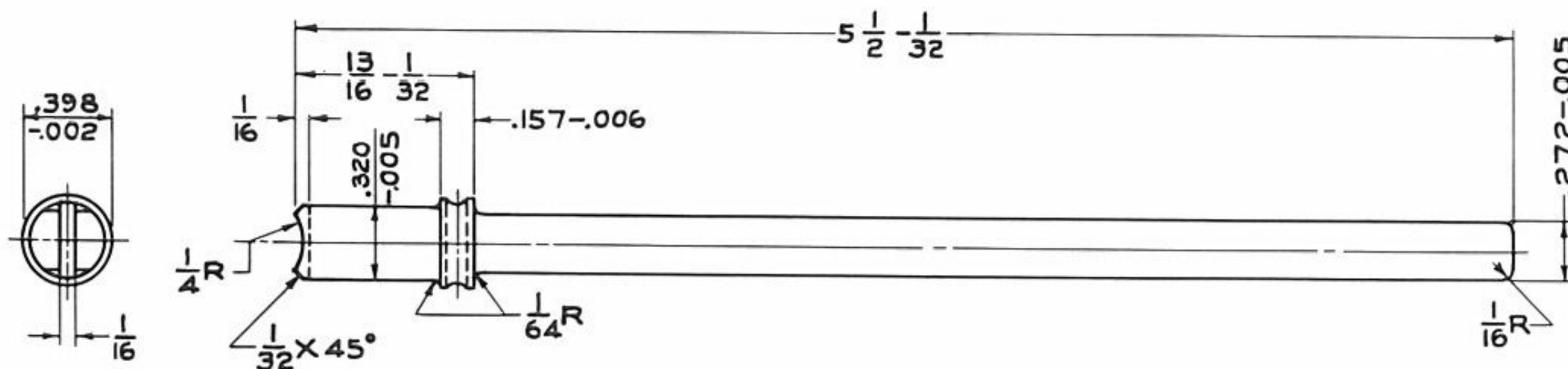
DRAFTSMAN	TRACER	L'D-G DRAFTSMAN
M. S. J.	E. B.	
CHECKER	C.D.	CHIEF DRAFTSMAN

SUBMITTED:

A.H. Rose

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:Walter Ackerman  
ORD. DEPT., U. S. A.

ORDNANCE DEPT U. S. A.

.093 $\pm$ .001VIEW SHOWING ALTERNATIVE  
METHOD OF MANUFACTURE

ROD, DRIVING SPRING

STEEL FS 1095

FINISH 125/

6017509

WAS B17509

SCALE 2/1 B 6017509

B6017509

HEAT TREAT  
TYPE II FINISH, CLASS B

SCL

C42-47

## REVISIONS

19	5-10-48
----	---------

DRG. PERTAINS TO

51-10-46	30 BMG M17A1 (WC)
51-83-4	30 BMG M19A4 (FXD)
51-84-4	30 BMG M19A4 (FLEX)
51-114-4	30 BMG M19A5 (FXD)
51-125-4	30 BMG M19A6

DO

INSCRIBE ~~PART NO.~~

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 0^{\circ}30'$

DRAFTSMAN C.S.S.	TRACER E.R.G.	L'D'G DRAFTSMAN
CHECKER L.S.C.		CHIEF DRAFTSMAN

**SUBMITTED:**

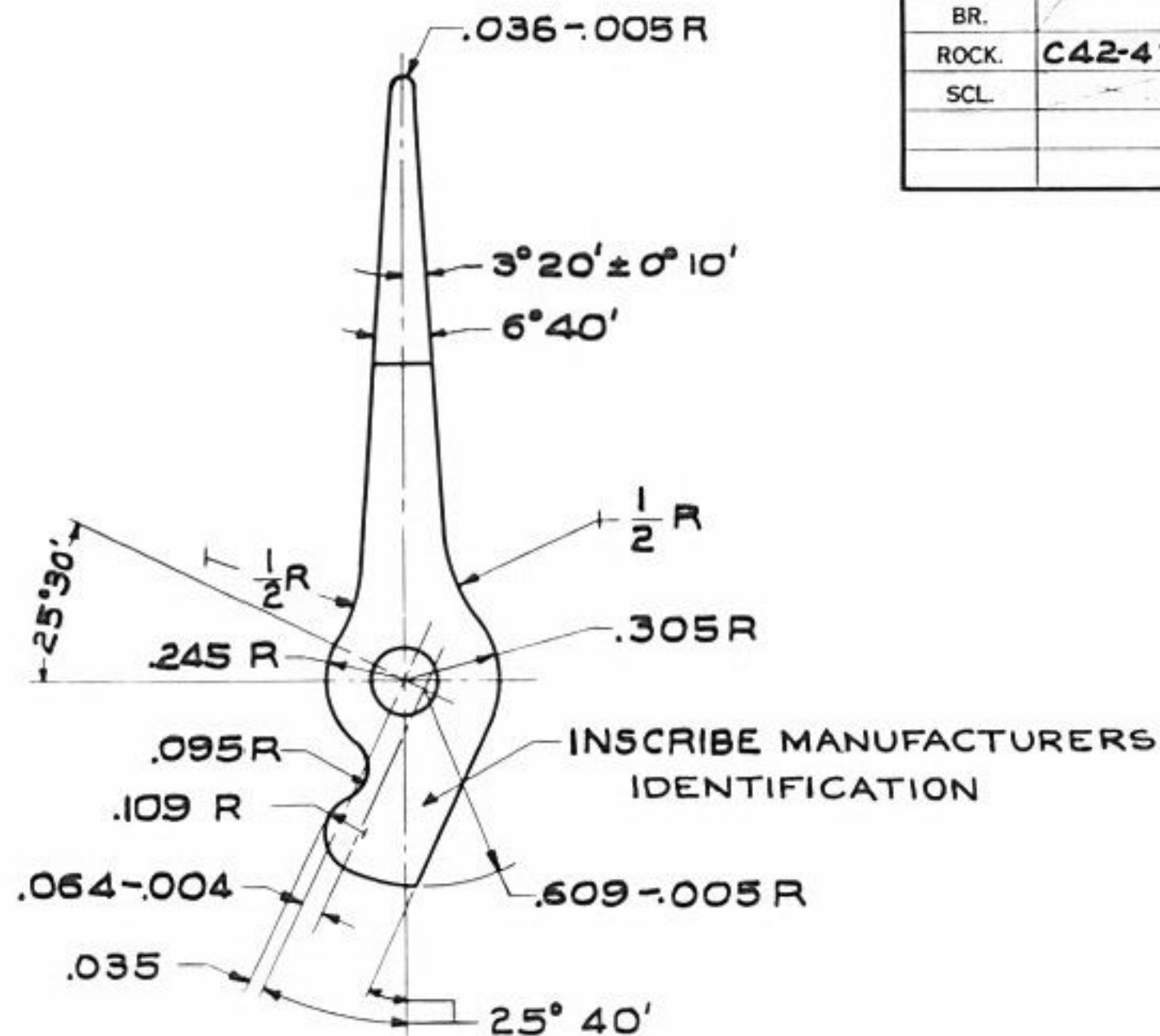
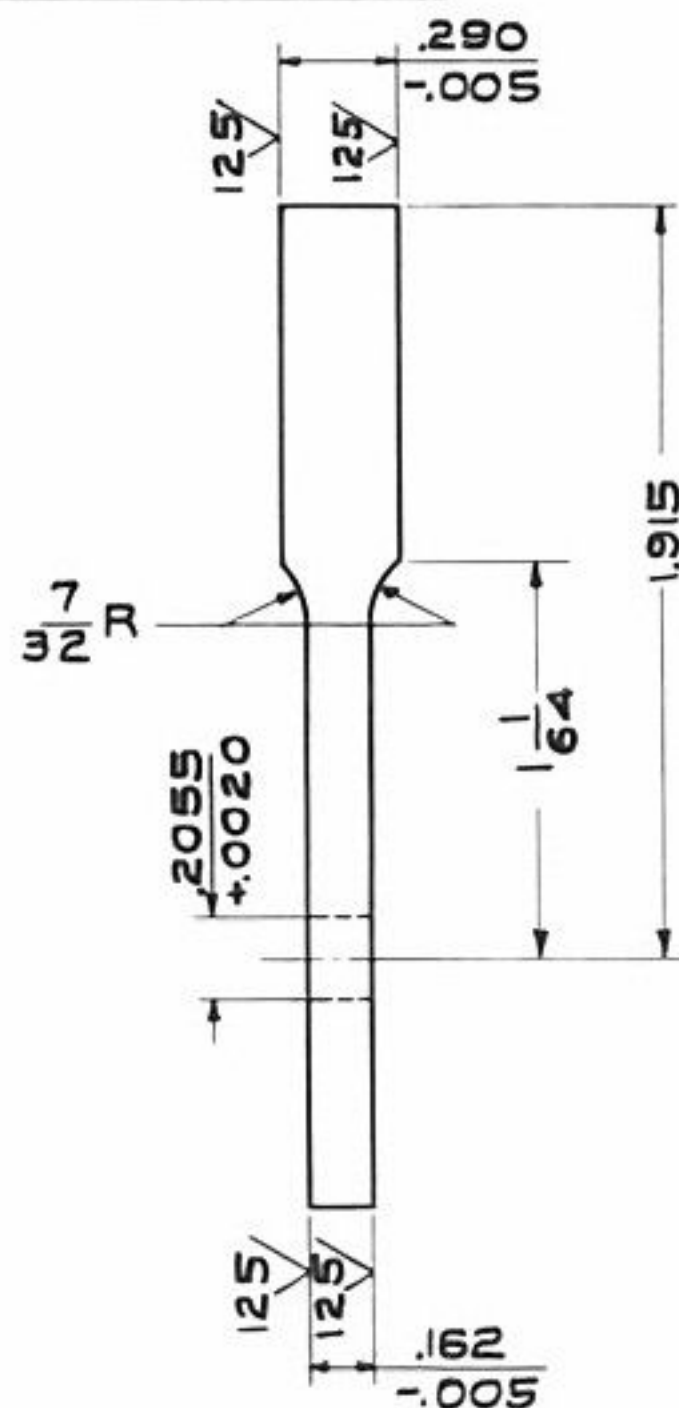
A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:-

Walter Ackerman  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



### LEVER, COCKING

FINISH 63 STEEL FSX4340 (6/3/3/7)  
OTHER SURFACES, AS SPECIFIED

WAS B131317

SCALE  $\frac{2}{1}$  B 6131317



HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS BPHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	C29-38
SCL.	

FEBRUARY 1, 1938

REVISIONS

10	5-10-48		

DRG. PERTAINS TO

51-10-45	.30 BMG M17A1 (WC)
51-83-5	.30 BMG M19A4 (FXD)
51-84-5	.30 BMG M19A4 (FLEX)
51-125-5	.30 BMG M19A6

INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 5^\circ$ 

DRAFTER	TRACER	L'D-G DRAFTER
W.C.O.	O.K.	
CHECKER		CHIEF DRAFTER
W.C.O.		

SUBMITTED:

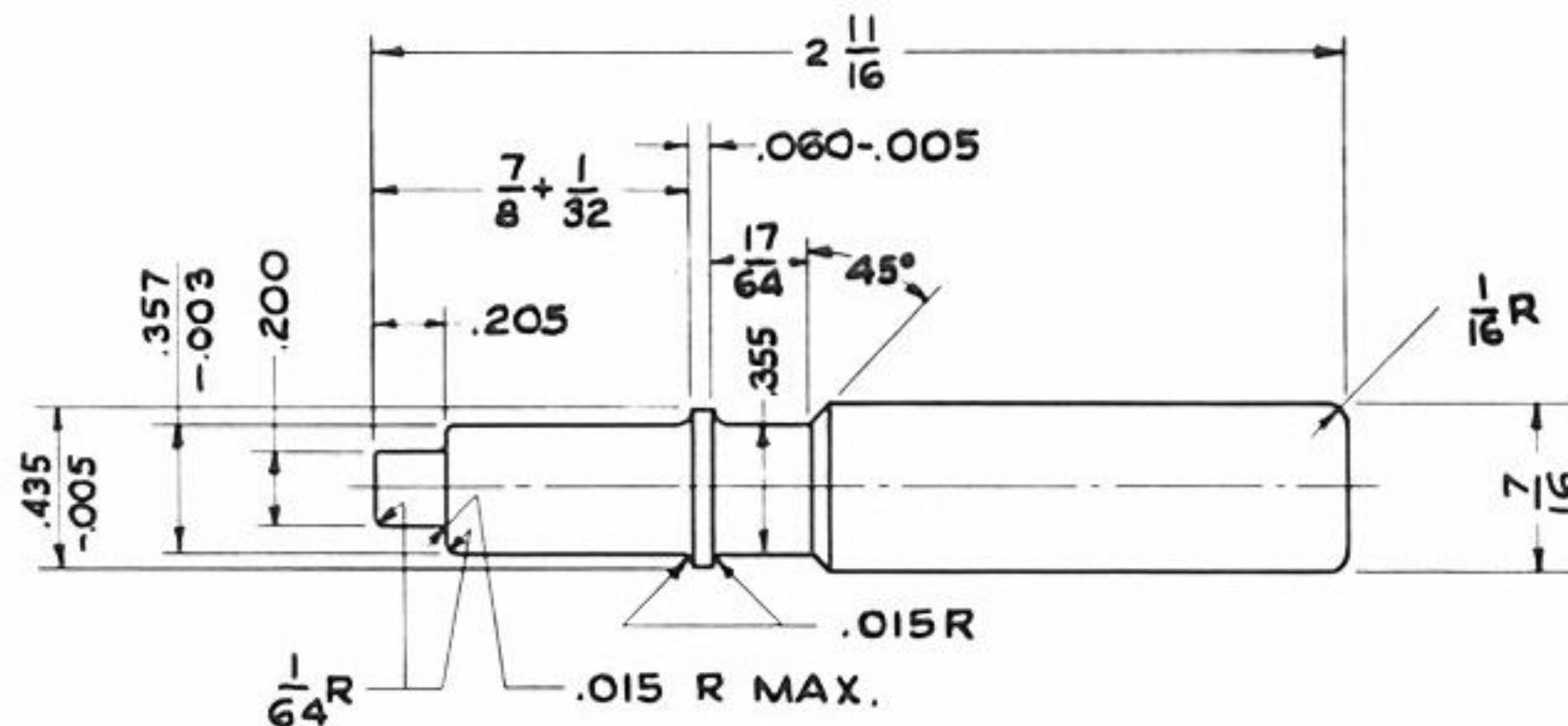
*A.M. Roe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



**HANDLE BOLT** (6147212)  
STEEL F S 1045  
FINISH 125/

SCALE  $\frac{2}{1}$ 

WAS B147212

B 6147212

HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS BPHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	C52-58
SCL.	

FEB. 1, 1938

REVISIONS

13 5-10-48

DRG. PERTAINS TO

51-10-45	.30 BMG M17A1 (WC)
51-83-4	.30 BMG M19A4 (FXD)
51-84-4	.30 BMG M19A4 (FLEX)
51-114-4	.30 BMG M19A5 (FXD)
51-125-4	.30 BMG M19A6

DO

INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 1^\circ$

DRAFTSMAN W.C.O.	TRACER O.K.	L'D'G DRAFTSMAN
CHECKER H.W.J.		CHIEF DRAFTSMAN

SUBMITTED:

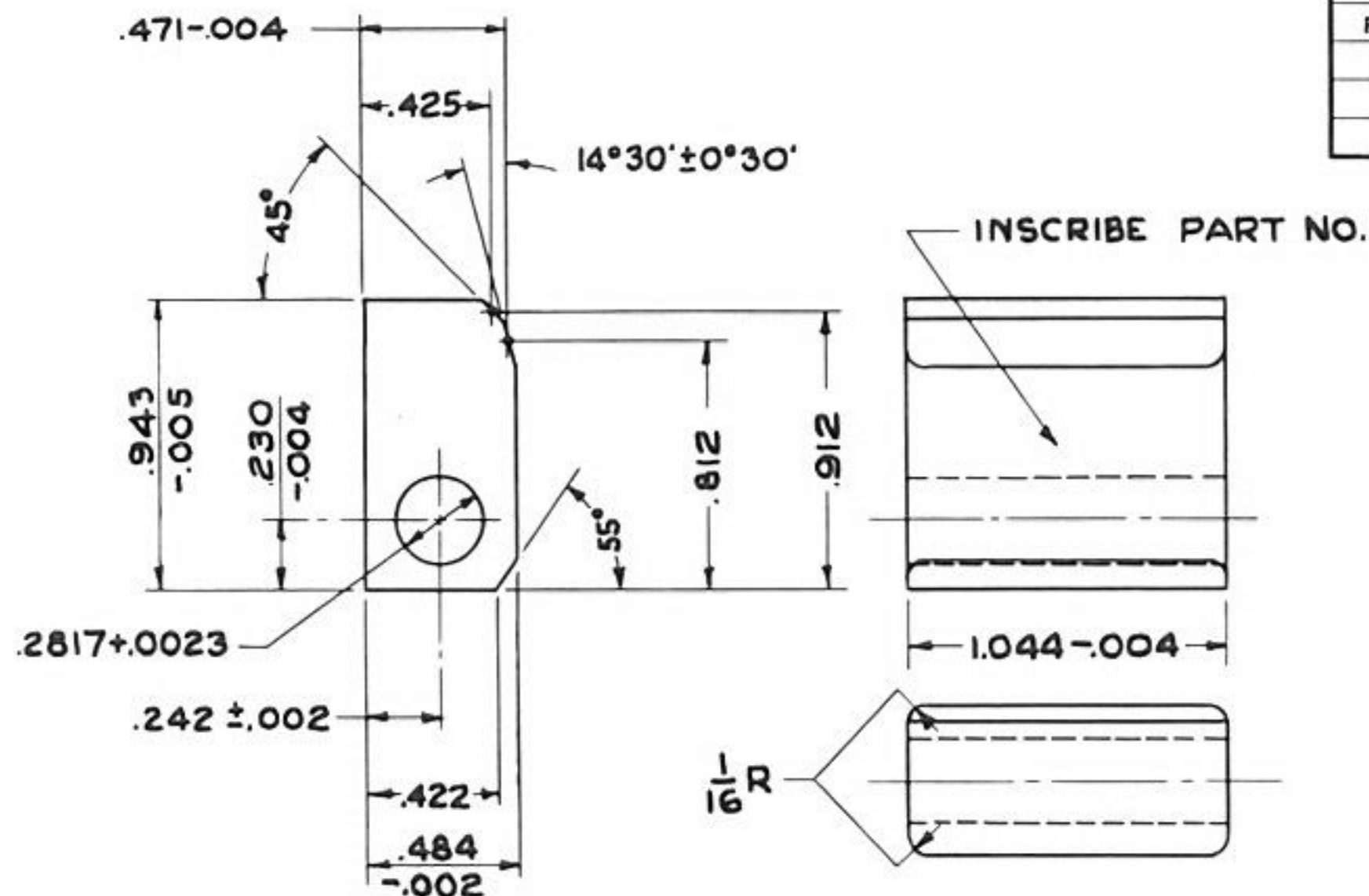
*A.H. Poe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:-*Walter Ackerman*  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

.045X45°

ALTERNATIVE METHOD  
OF MANUFACTURE

**LOCK, BREECH**  
STEEL FSX 4340  
FINISH 63

6147214

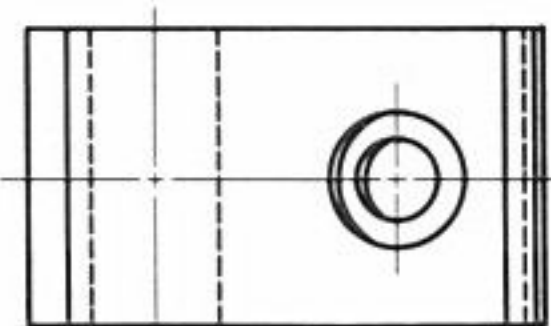
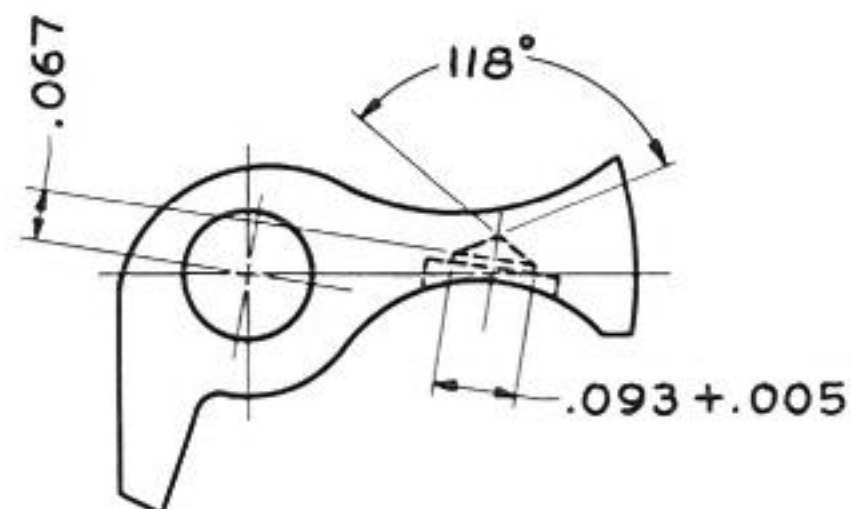
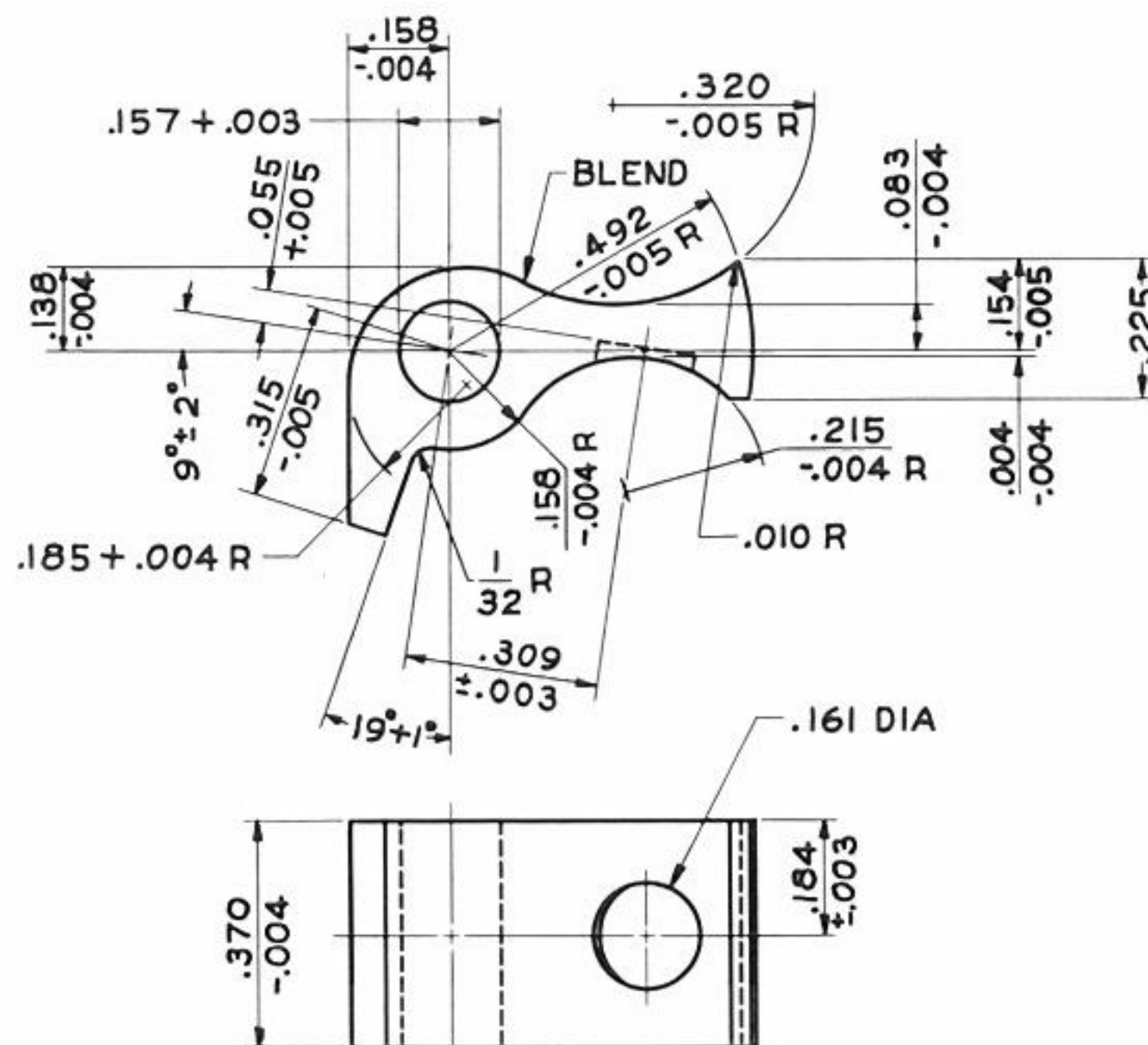
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WAS B 147214

B 6147214

B6147214

HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS B**ALTERNATIVE METHOD  
OF MANUFACTURE****PAWL, HOLDING, BELT**  
STEEL FS 4140  
FINISH 125/

6147216

WAS B147216

SCALE  $\frac{4}{1}$ 

B 6147216

PHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	C45-52
SCL.	

FEBRUARY 1, 1938

REVISIONS

13 5-10-48

DRG. PERTAINS TO

51-10-45	.30 BMG M17A1 (WC)
51-83-5	.30 BMG M19A4 (FXD)
51-84-5	.30 BMG M19A4 (FLEX)
51-114-5	.30 BMG M19A5 (FXD)
51-125-5	.30 BMG M19A6

INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± .005  
FRACTIONAL ± 1/64  
ANGULAR ± 1°

DRAFTSMAN W.C.O.	TRACER L.R.E.	L'D'G DRAFTSMAN
CHECKER V.C.	CHECKER G.O.	CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:-

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

B6147216





HEAT TREATMENT AND FINAL FINISH

PHYSICAL  
PROPERTIESY. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

FEB. 1, 1938

## REVISIONS

4 5-10-48

## DRG. PERTAINS TO

51-10-1	.30 BMG M17A1(WC)
51-83-1	.30 BMG M19A4(FXD)
51-84-1	.30 BMG M19A4(FLEX)
51-114-1	.30 BMG M19A5(FXD)
51-125-1	.30 BMG M19A6

INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN H.S.	TRACER E.R.G.	L'D'G DRAFTSMAN
CHECKER L.S.	Q.D.	CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

PIN-A20498

ROD-B6017509

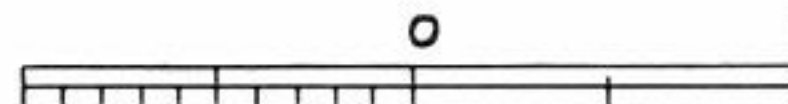
ROD, DRIVING SPRING, ASSEMBLY

6147222

WAS B147222

B 6147222

1 IN.



B6147222

HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS BPHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	A72-76
SCL.	

FEBRUARY 1, 1938

REVISIONS

11	5-10-48		

DRG. PERTAINS TO

51-10-45	.30 BMG M17A1 (WC)
51-83-5	.30 BMG M19A4 (FXD)
51-84-5	.30 BMG M19A4 (FLEX)
51-114-5	.30 BMG M19A5 (FXD)
51-125-5	.30 BMG M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 2^\circ$

DRAFTSMAN T.J.C.	TRACER A.V.C.	L'D'G DRAFTSMAN
CHECKER L.S.C.		CHIEF DRAFTSMAN

SUBMITTED:

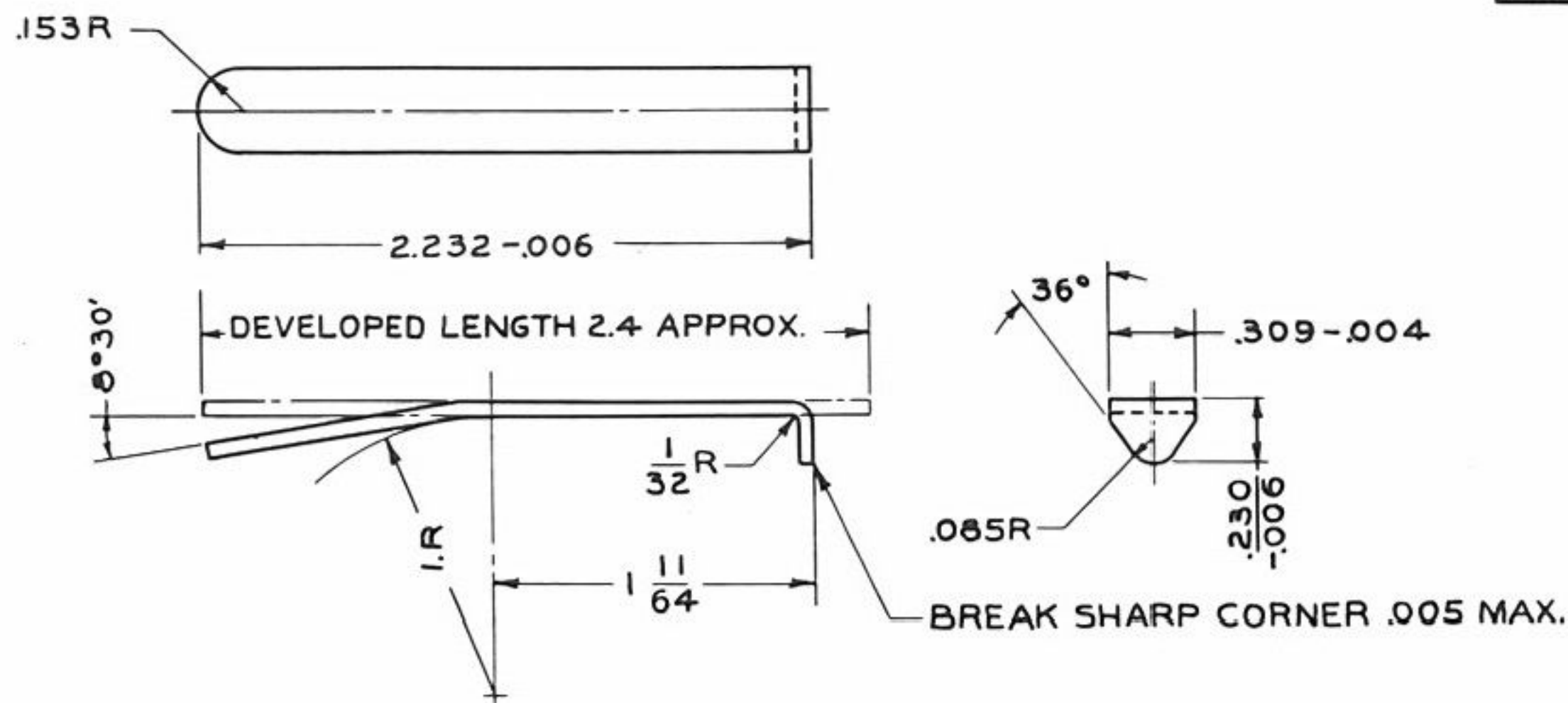


ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:


ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**SPRING, LOCKING, BARREL**

SPRING STEEL WD1095  
NO. 18 (.0478 U.S. GAGE) THICK

6147230

SCALE  $\frac{2}{1}$ 

WAS B147230

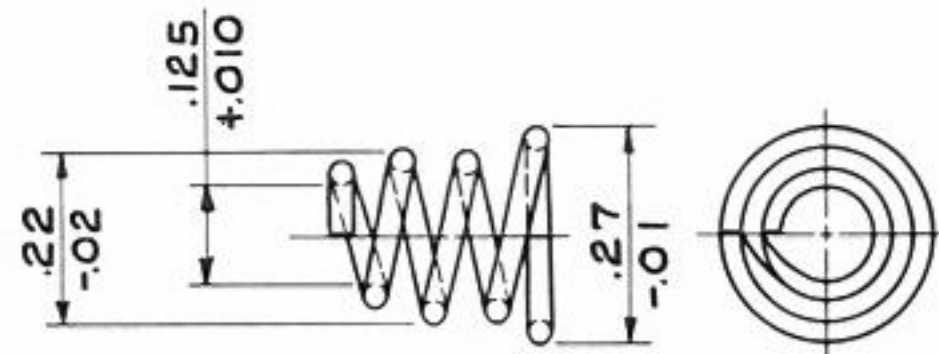
B 6147230

B6147230



## HEAT TREATMENT AND FINAL FINISH

DRAW AT 450°F  
TYPE I FINISH, CLASS OSC  
BAKE ONE HOUR AT 300-350°F



DIAMETER OF WIRE \_\_\_\_\_ .031  
TOTAL NUMBER OF COILS \_\_\_\_\_ 4  
OUTSIDE DIAMETER, FREE \_\_\_\_\_ .22-.02  
MAX. OUTSIDE DIA AT MIN. OPERATING HEIGHT \_\_\_\_\_ .270  
FREE LENGTH \_\_\_\_\_ .28-.02  
TYPE OF ENDS \_\_\_\_\_ AS SHOWN  
WOUND \_\_\_\_\_ L.H.  
MEAN ASSEMBLED HEIGHT \_\_\_\_\_ .242  
MIN. LOAD AT MEAN ASSEMBLED HEIGHT \_\_\_\_\_ 2. LB  
MINIMUM OPERATING HEIGHT \_\_\_\_\_ .131  
MIN. LOAD AT MIN. OPERATING HEIGHT \_\_\_\_\_ 7.85 LB  
LB PER INCH OF SPRING DEFLECTION \_\_\_\_\_ 52.6  
SPRING FUNCTIONS IN HOLE \_\_\_\_\_ (LARGE END) .252  
SPRING FUNCTIONS OVER ROD \_\_\_\_\_ (SMALL END) .135

CAUTION: DO NOT COMPRESS SOLID.

**SPRING, TRIGGER PIN**  
**SPRING STEEL WIRE WD1085 SPECIAL-CLASS A**

6147231

WAS B147231

SCALE  $\frac{4}{1}$

B 6147231

PHYSICAL  
PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED.  
BR.  
ROCK  
SCL.

FEBRUARY 1, 1938

## REVISIONS

9 5-10-48

## DRG. PERTAINS TO

51-10-45 .30 BMG  
M17A1(WC)  
51-83-5 .30 BMG  
M19A4(FXD)  
51-84-5 .30 BMG  
M19A4(FLEX)  
51-114-5 .30 BMG  
M19A5(FXD)  
51-125-5 .30 BMG  
M19A6

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm$  —  
FRACTIONAL  $\pm$  —  
ANGULAR  $\pm$  —

DRAFTSMAN  
W.L.M.

TRACER  
M.C.

L'D'G DRAFTSMAN

CHECKER

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

B6147231

B6212654

## HEAT TREATMENT AND FINAL FINISH

DRAW AT 450°F.  
TYPE I FINISH, CLASS OSC  
BAKE ONE HOUR AT 300-350°F.

DIAMETER OF WIRE .045  
TOTAL NUMBER OF COILS (ADJUST TO OBTAIN LOAD) 103 APPROX  
MINIMUM INSIDE DIAMETER, FREE .300  
OUTSIDE DIAMETER, FREE .395 ± .004  
MAX. OUTSIDE DIA AT MIN. OPERATING HEIGHT .404  
FREE LENGTH 15.875 ± .25  
TYPE OF ENDS ENDS CLOSED AND GROUND SQUARE  
WOUND R.H. OR L.H.  
MEAN ASSEMBLED HEIGHT 9.875  
LOAD AT MEAN ASSEMBLED HEIGHT 8.2 LB ± .7 LB  
MINIMUM OPERATING HEIGHT 5.311  
LOAD AT MINIMUM OPERATING HEIGHT 14.3 LB ± 1 LB  
LB PER INCH OF SPRING DEFLECTION 1.35  
SPRING FUNCTIONS IN HOLE .408  
SPRING FUNCTIONS OVER ROD .272  
SOLID HEIGHT NOT TO EXCEED 4.9

CAUTION: DO NOT COMPRESS SOLID

## NOTE:

0.5% OF SPRINGS WILL BE FATIGUE TESTED  
BETWEEN ASSEMBLED HEIGHT AND MINIMUM  
OPERATING HEIGHT FOR 50,000 CYCLES. THE  
LOAD AT ASSEMBLED HEIGHT, AFTER TESTING,  
SHOULD NOT BE LESS THAN 6.5 LB

**SPRING, DRIVING**

SPRING STEEL WIRE WD1085 SPECIAL - CLASS A

6212654

PHYSICAL  
PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED.  
BR.  
ROCK  
SCL.

JANUARY 8, 1942

## REVISIONS

B 5-10-48

## DRG. PERTAINS TO

51-10-45 .30 BMG  
M17A1 (WC)  
51-83-5 .30 BMG  
M19A4 (FXD)  
51-84-5 .30 BMG  
M19A4 (FLEX)  
51-114-5 .30 BMG  
M19A3 (FXD)  
51-125-5 .30 BMG  
M19A6

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± -  
FRACTIONAL ± -  
ANGULAR ± -

DRAFTSMAN  
M.D.I.TRACER  
M.C.

L'D'G DRAFTSMAN

CHECKER

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter A. Auman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

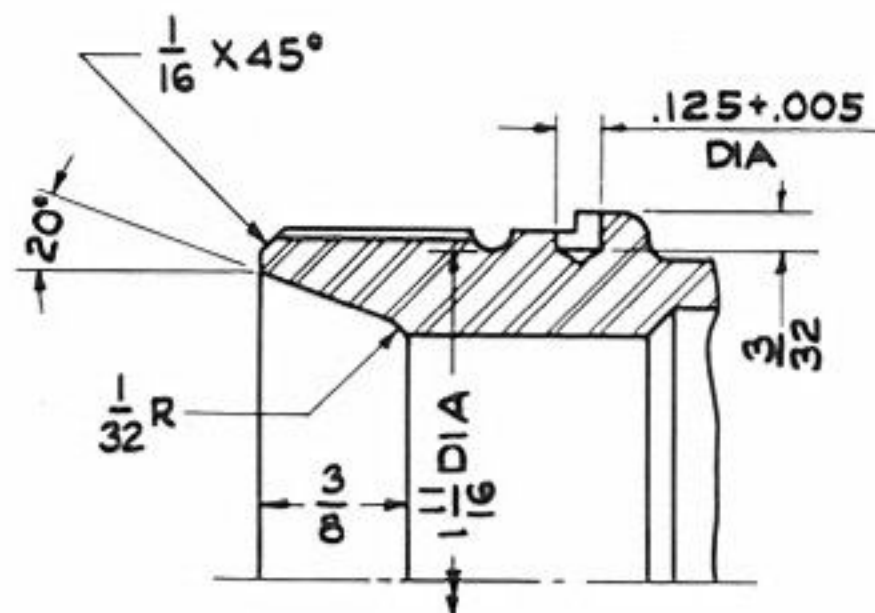
WAS B212654

B 6212654



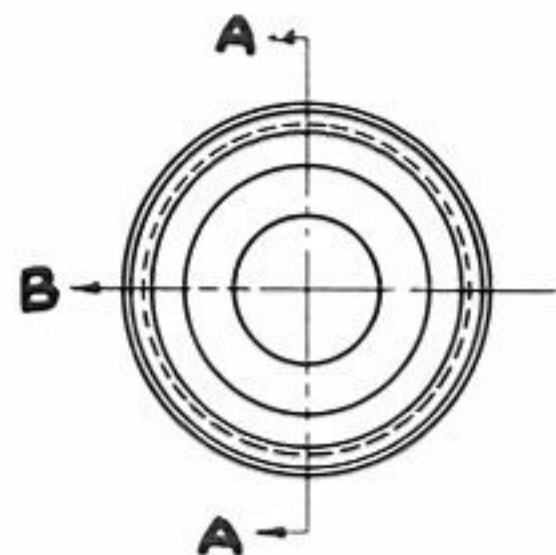
HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B

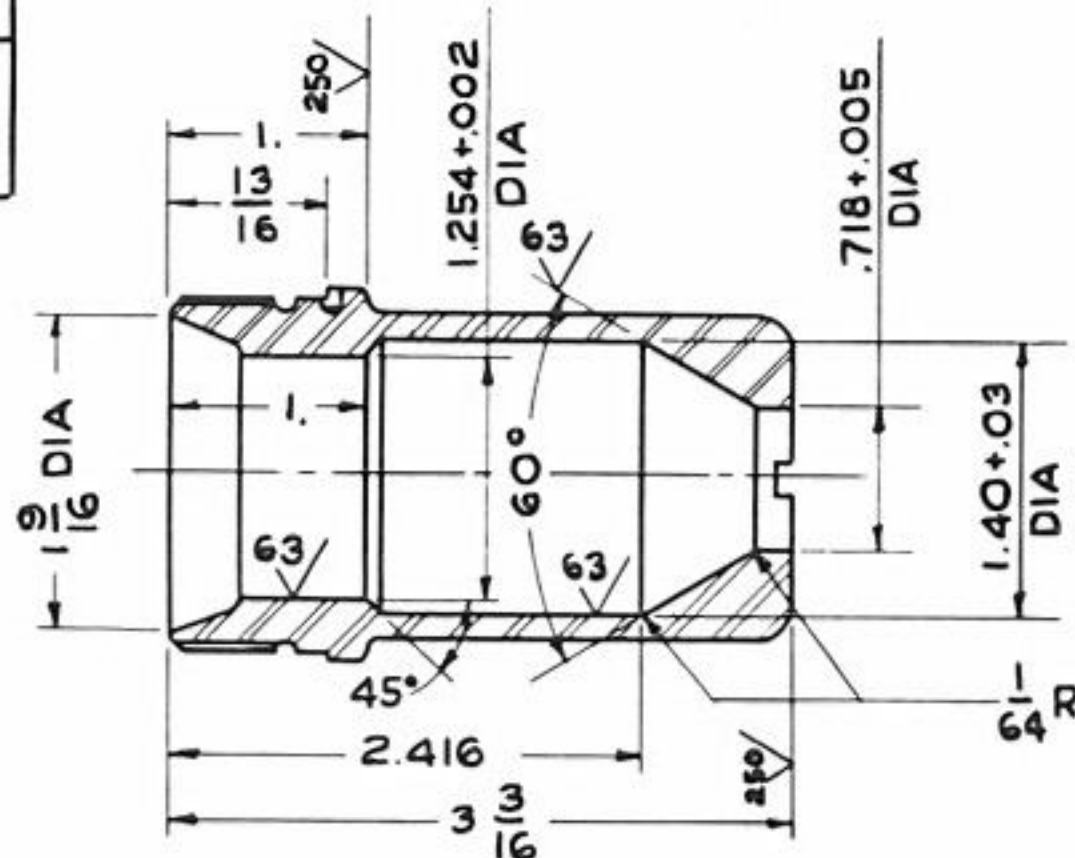


SECTION A-B

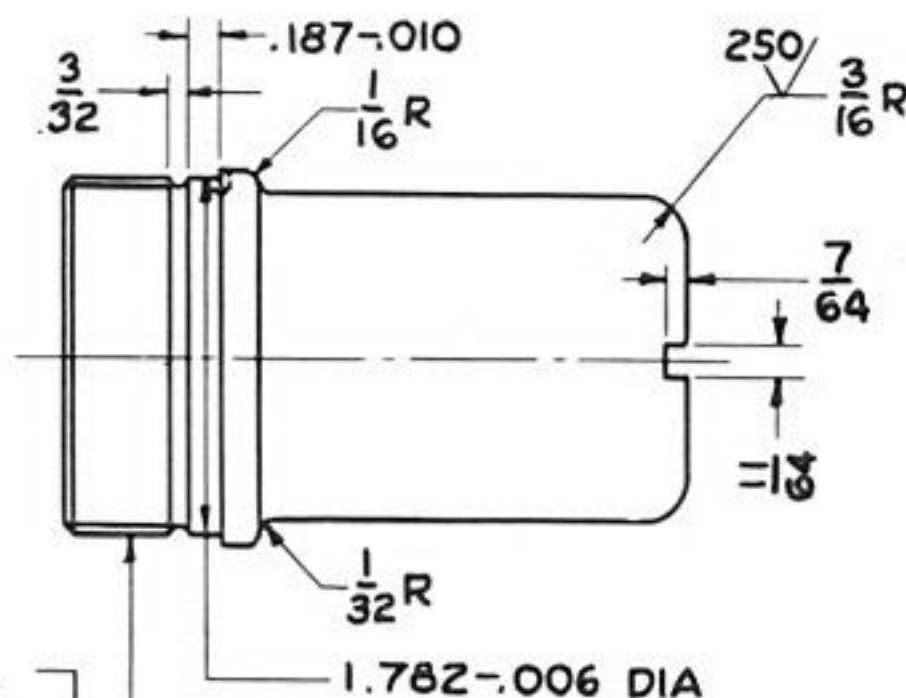
SCALE  $\frac{2}{1}$



1.78-22NS-3 [ MAJOR DIA 1.7800-.0100  
PITCH DIA 1.7505-.0044  
MINOR DIA 1.7242 MAX. ]



SECTION A-A



BEARING, BARREL, FRONT

STEEL FSX 1335

FINISH  $\frac{125}{V}$ , OTHER SURFACES AS SPECIFIED

6221301

SCALE  $\frac{1}{1}$

PHYSICAL PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

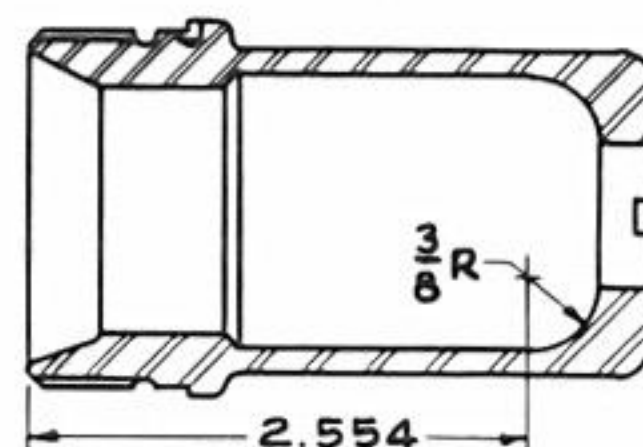
JULY 18, 1942

REVISIONS

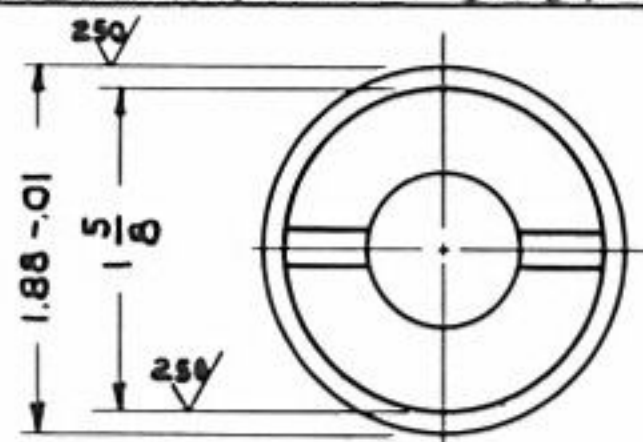
8 5-10-48

DRG. PERTAINS TO

51-83-4 30 BMG M19A4 (FXD)  
51-84-4 30 BMG M19A4 (FLEX)  
51-114-4 30 BMG M19A5 (FXD)



ALTERNATIVE DESIGN



INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .010$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 1^\circ$

DRAFTSMAN R.J.S. TRACER O.K. L.D.G. DRAFTSMAN  
CHECKED W.B. CHIEF DRAFTSMAN

SUBMITTED:  
A.H. Roe  
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:  
Walter Ackerman  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

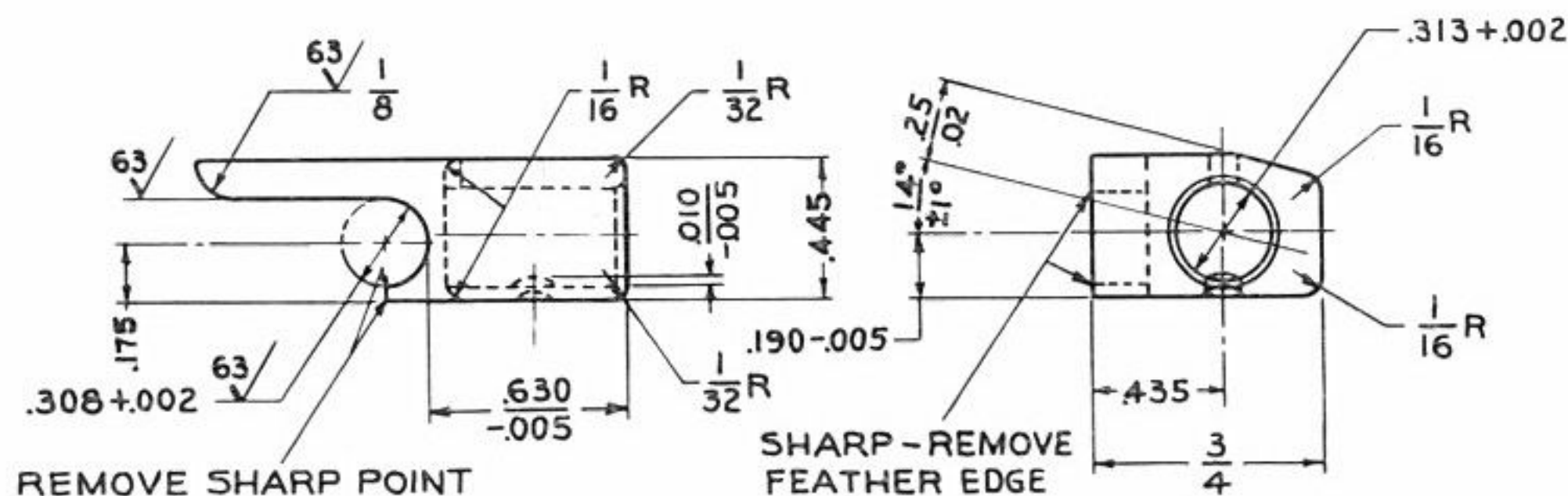
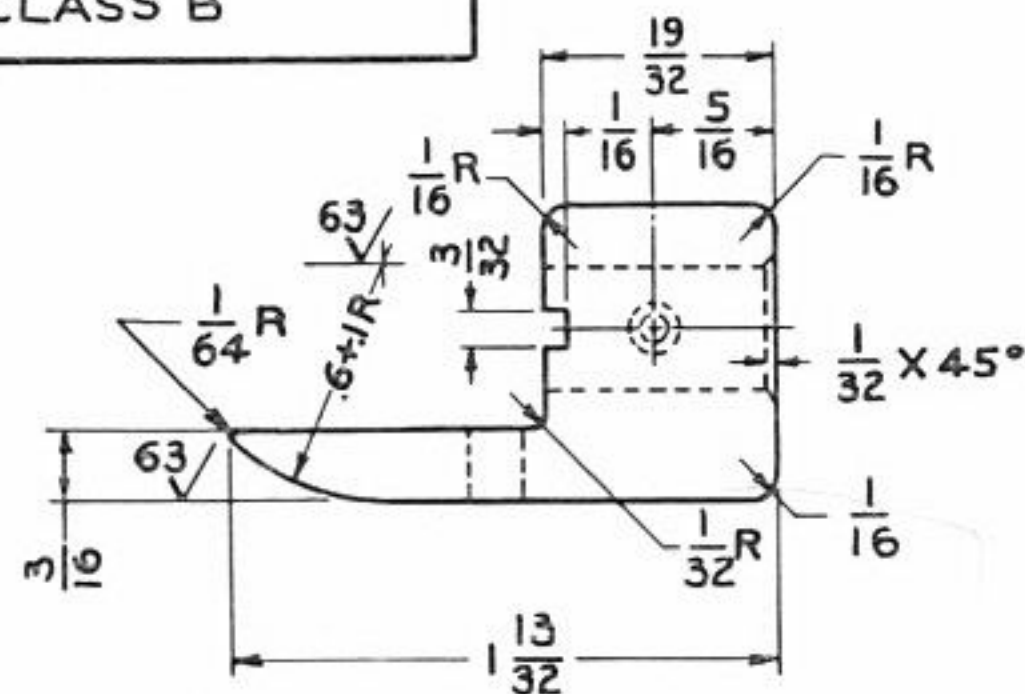
WAS B221301

B 6221301

B6221301

# HEAT TREATMENT AND FINAL FINISH

CASE HARDEN .010 DEEP APPROX  
TYPE II FINISH, CLASS B



**STOP, SHORT ROUND**

STEEL FS1020

7162248

FINISH 125/V, OTHER SURFACES, AS SPECIFIED

## PHYSICAL PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

MARCH 6, 1946

## REVISIONS

1 5-10-48

## DRG. PERTAINS TO

51-10-45 .30 BMG  
M17A1 (WC)  
51-83-5 .30 BMG  
M19A4 (FXD)  
51-84-5 .30 BMG  
M19A4 (FLEX)  
51-114-5 .30 BMG  
M19A5 (FXD)  
51-125-5 .30 BMG  
M19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± .005  
FRACTIONAL ± 1/64  
ANGULAR ± 5°

DRAFTSMAN L.E.K. TRACER A.V.C. L'D'G DRAFTSMAN  
CHECKER G.D. CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

SUPERSEDES B7162248 W O/C 5-10-48

SCALE 2/1

B 7162248

B7162248

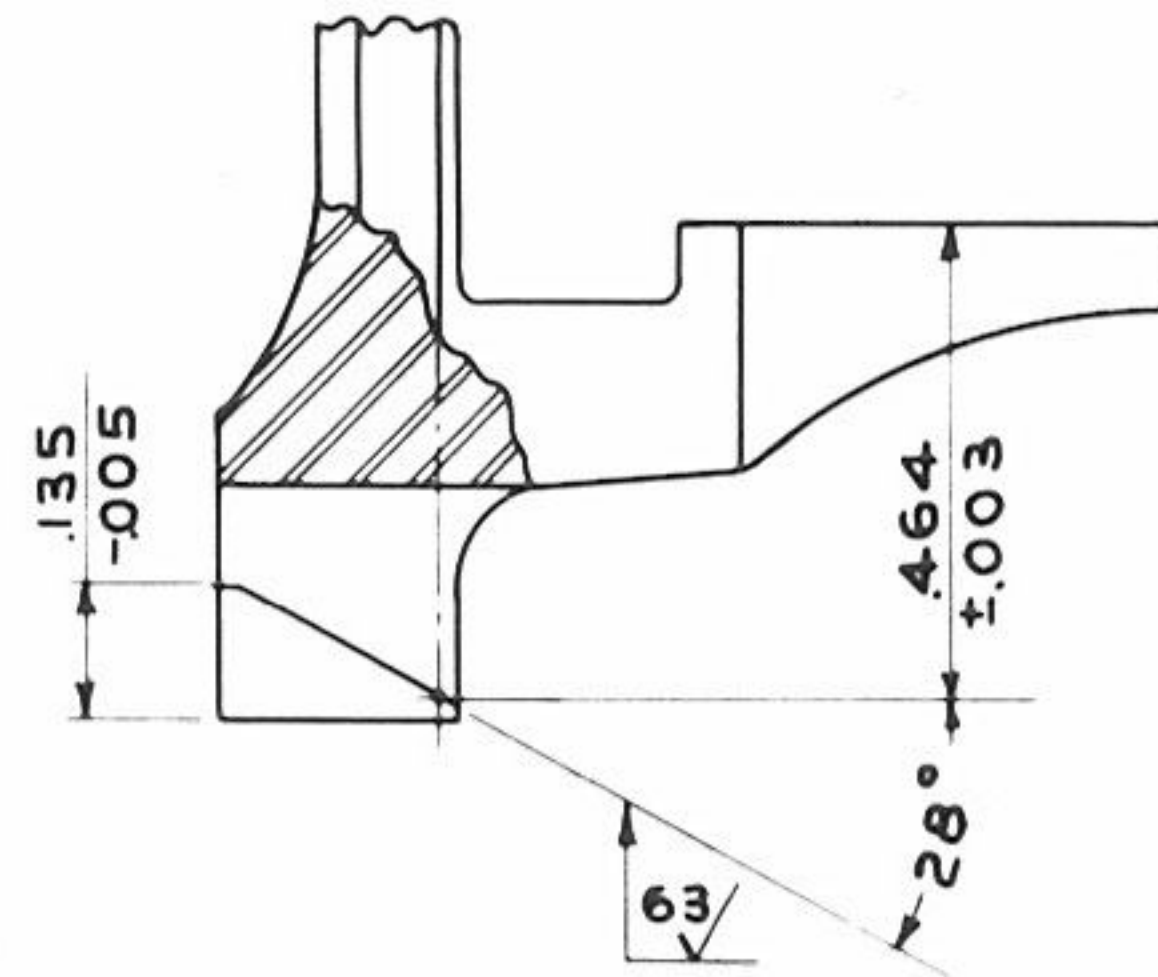
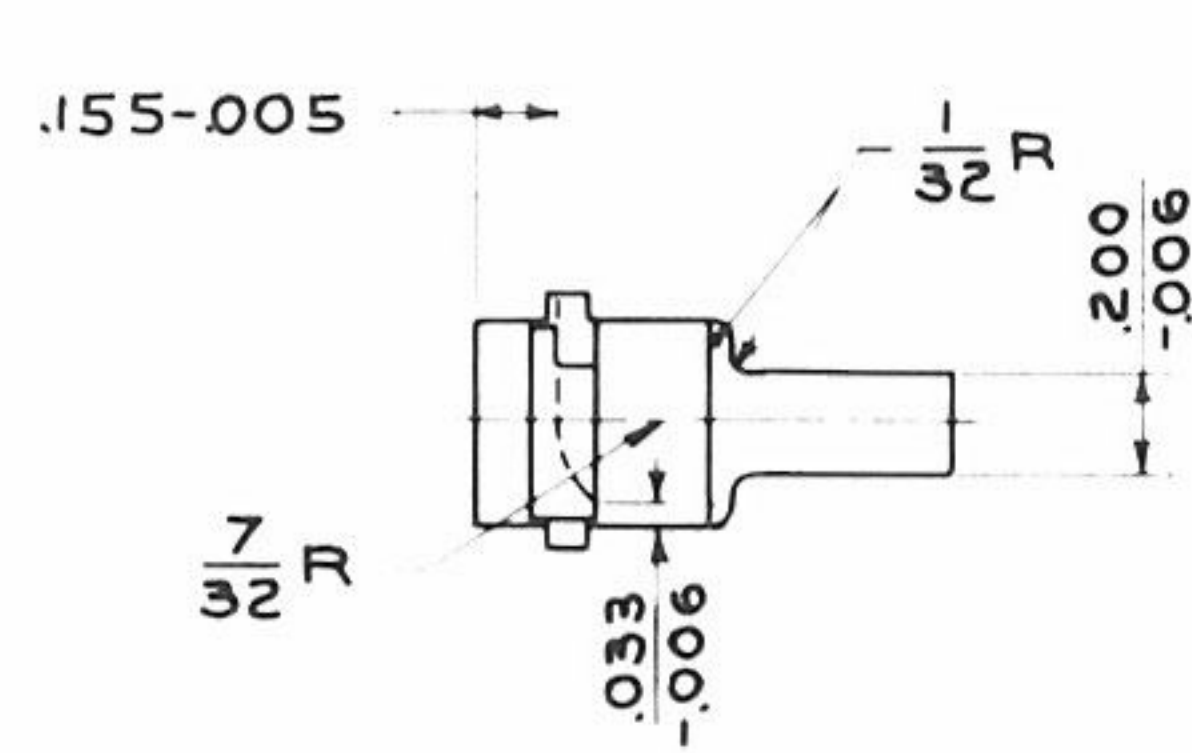


HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS B

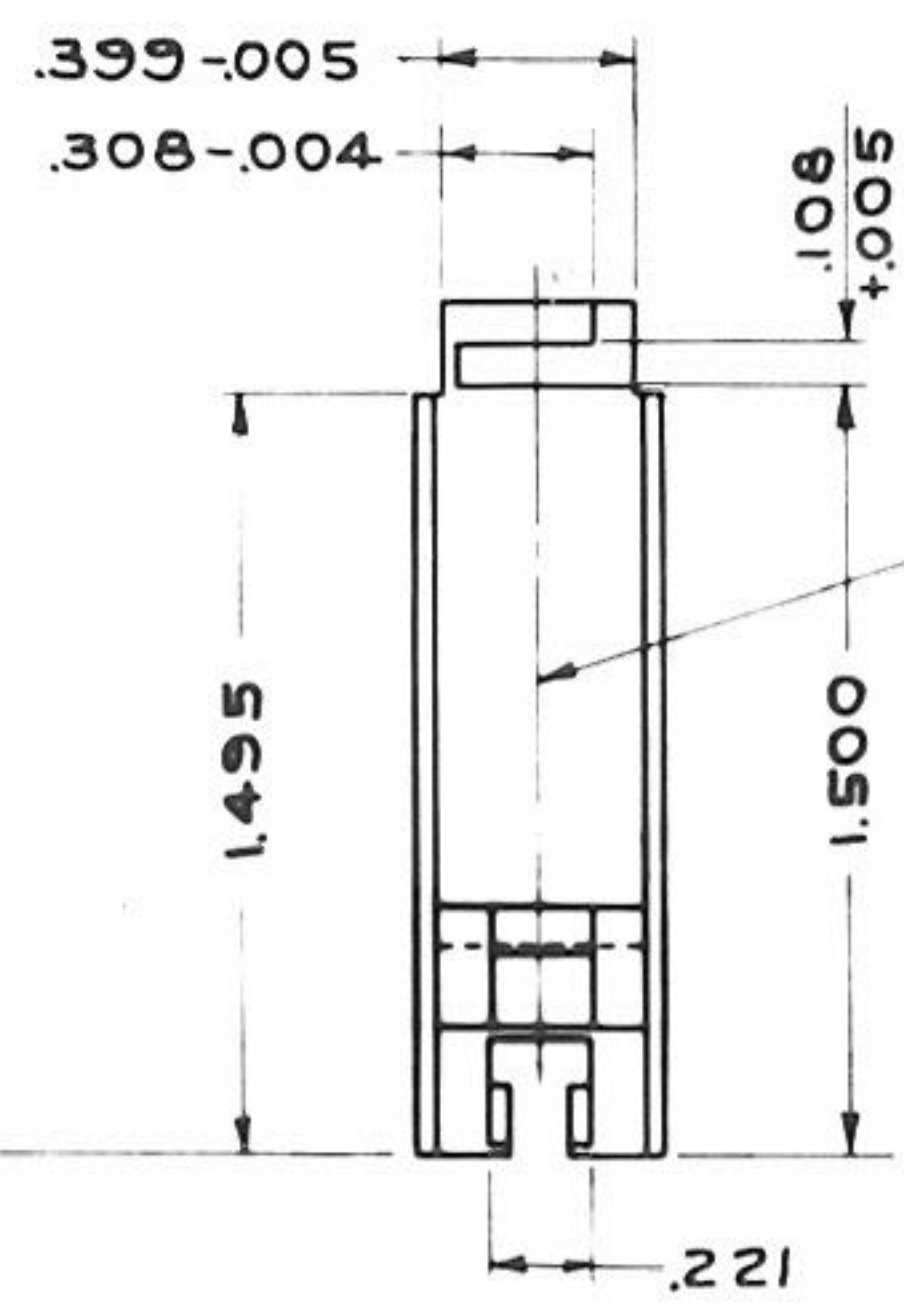
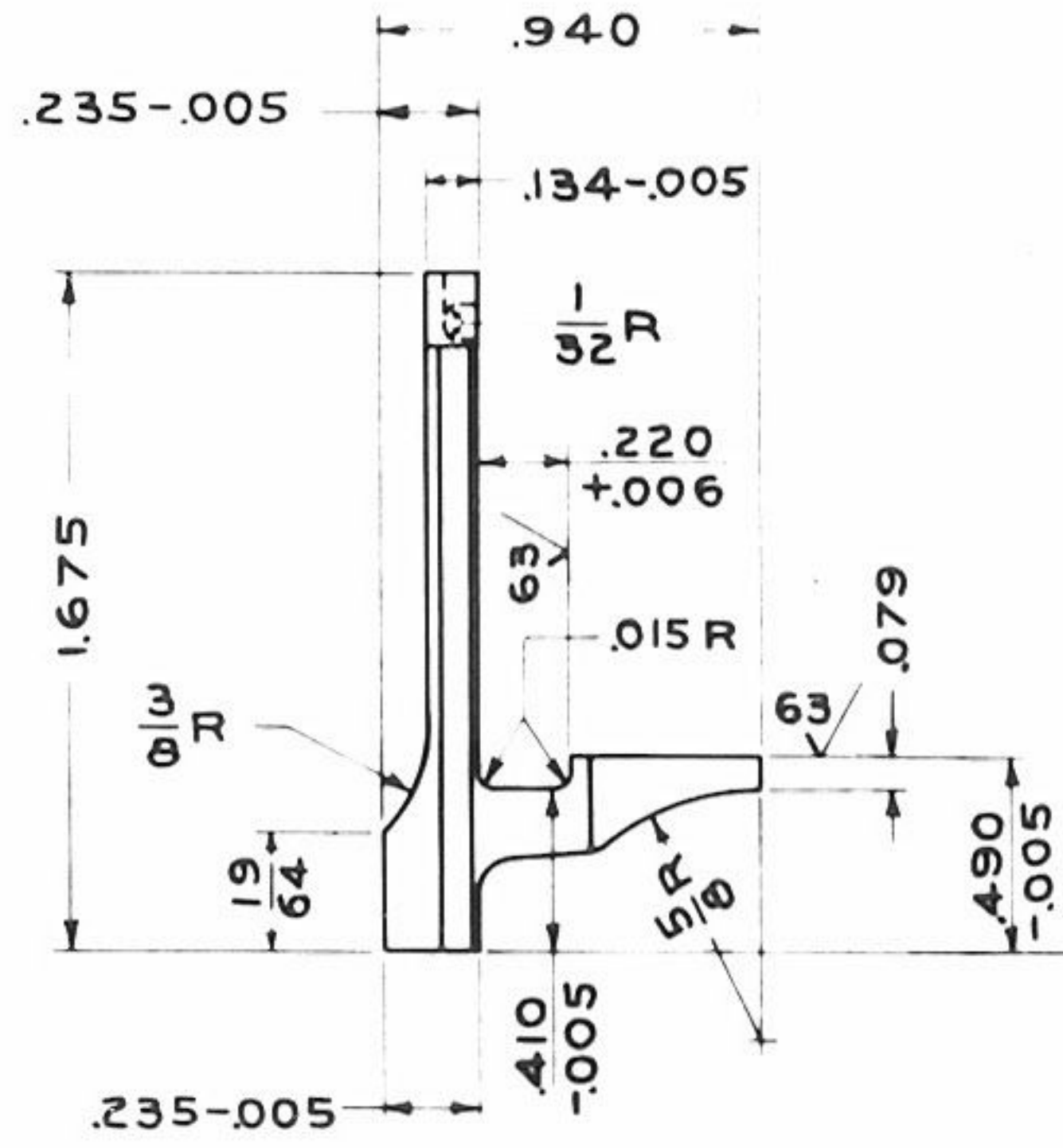
PHYSICAL PROPERTIES		FEBRUARY 1, 1938			
		REVISIONS			
Y. P.		15	5-10-48		
T. S.					
EL. 2					
RED					
BR.					
ROCK.	C47-52				
SCL.					

DRG. PERTAINS TO	
51-10-46	30 BMG M17A1 (WC)
51-83-4	30 BMG M19A4 (FXD)
51-84-4	30 BMG M19A4 (FLEX)
51-114-4	30 BMG M19A5 (FXD)
51-125-4	30 BMG M19A6

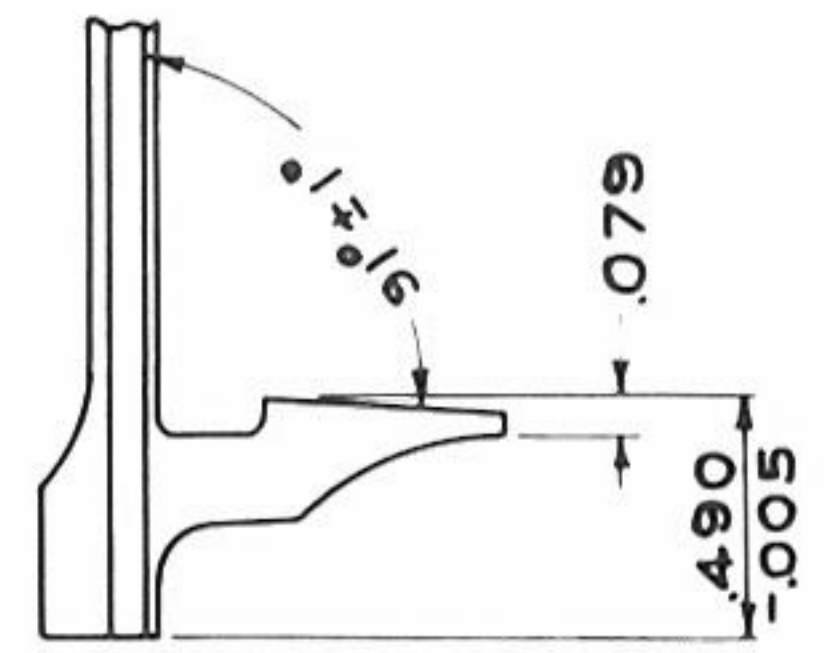
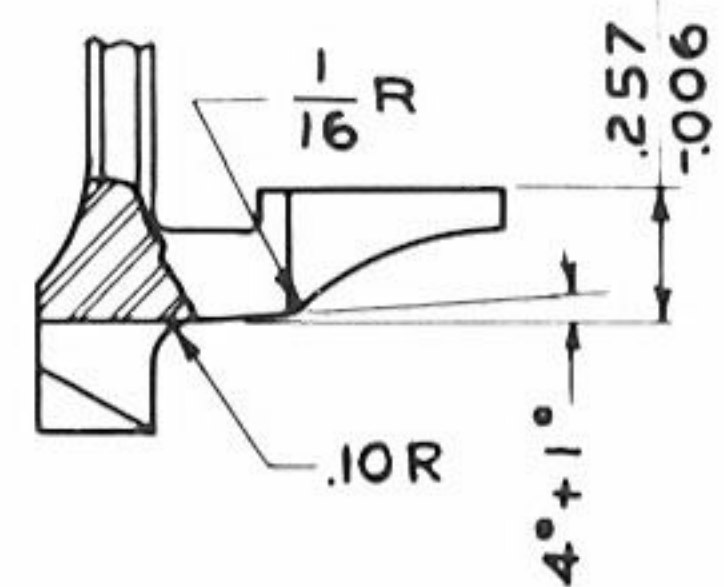


SCALE 4/1

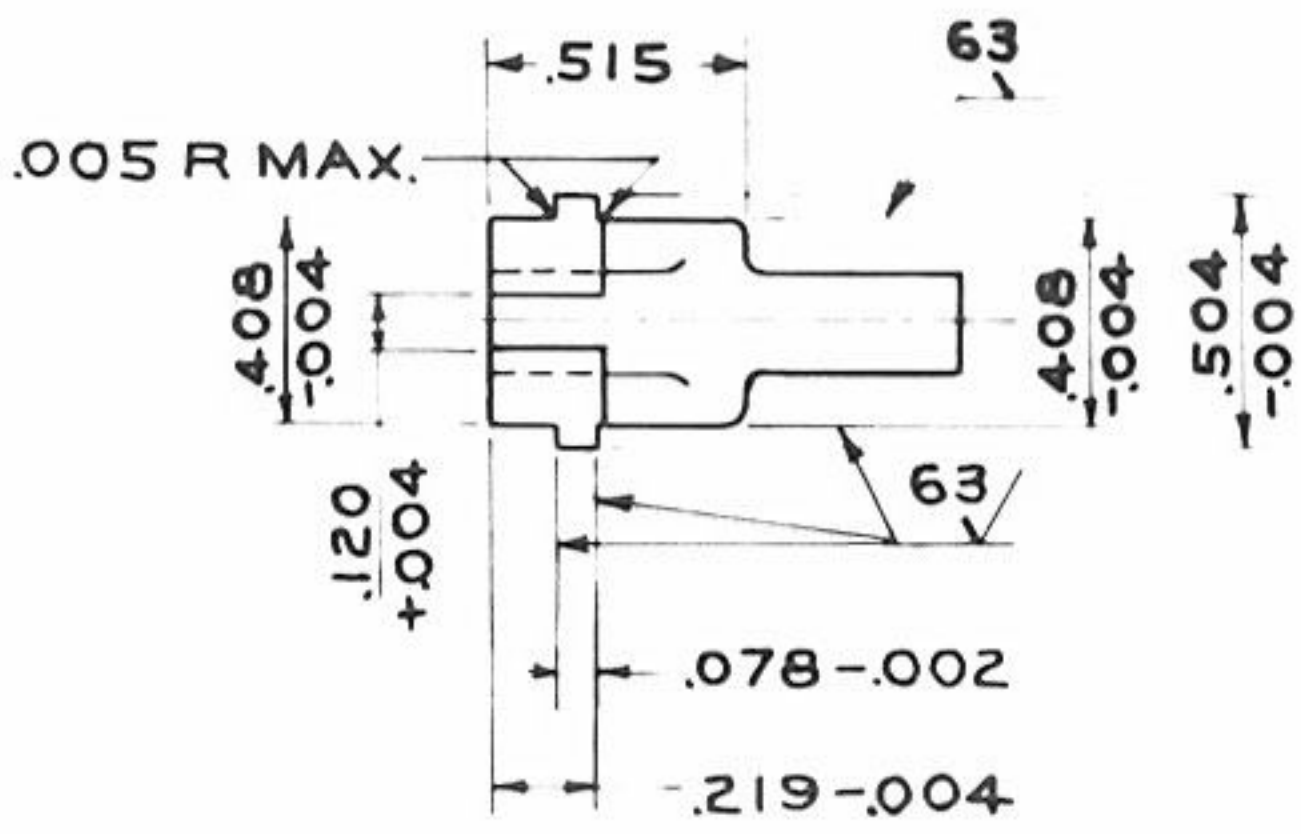
NOTE:  
PERMISSIBLE VARIATION OF  
ANGLE MUST BE WITHIN  
LIMITS DEFINED BY LOCATING  
DIMENSIONS.



INSCRIBE PART NO. 1/16 HIGH



ALTERNATIVE METHOD  
OF MANUFACTURE



SEAR  
STEEL FS 4140 5564137  
FINISH 125/1, OTHER SURFACES, AS SPECIFIED

SCALE 2/1

WAS C64137  
INSCRIBE PART NO.  
C 5564137

TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL ± .005 FRACTIONAL ± 1/64 ANGULAR ±		
DRAFTSMAN C.S.S.	TRACER A.V.C.	L.D.G. DRAFTSMAN
CHECKER L.S.C.		CHIEF DRAFTSMAN
SUBMITTED: A.H. ROE		
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE: Walter Ackerman ORD. DEPT. U. S. A.		
ORDNANCE DEPT., U. S. A.		

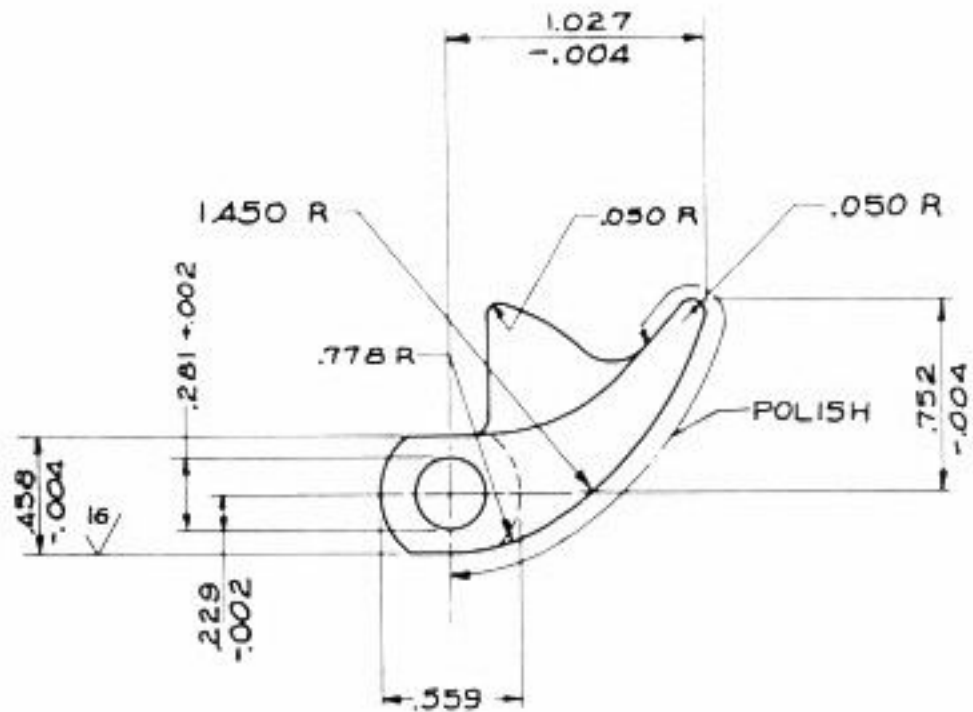
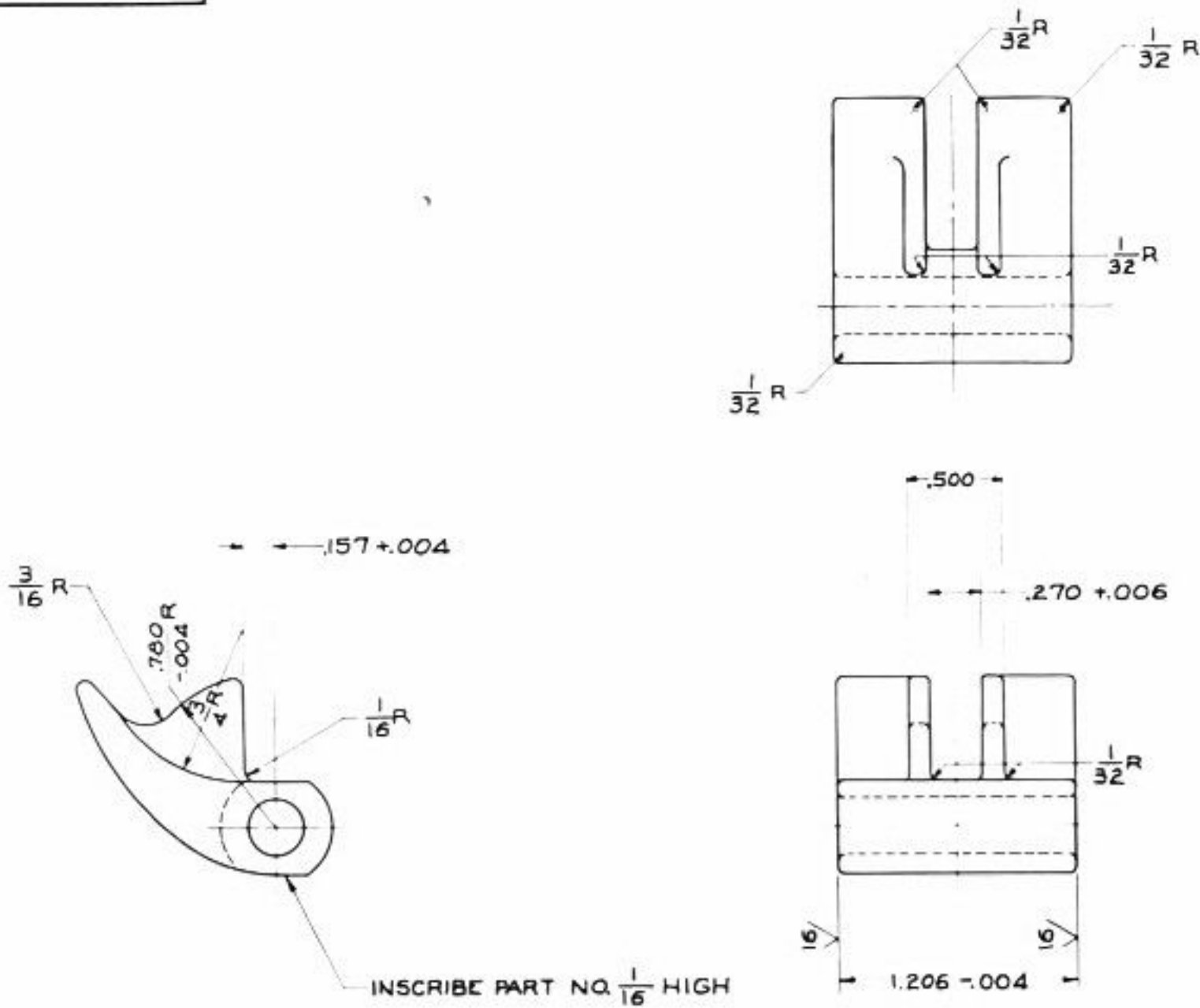
C5564137



HEAT TREATMENT AND FINAL FINISH  
HEAT TREAT  
TYPE II FINISH, CLASS B

PHYSICAL PROPERTIES		FEB. 1, 1938	
		REVISIONS	
Y. P.		14	5-10-48
T. S.			
EL. 2			
RED			
BR.			
ROCK.	C45-52		
SCL.			

DRG. PERTAINS TO	
51-10-46	.30 BMG M17A1(WC)
51-83-4	.30 BMG M19A4 (FXD)
51-84-4	.30 BMG M19A4 (FLEX)
51-114-4	.30 BMG M19A5 (FXD)
51-125-4	.30 BMG M19A6



**ACCELERATOR**  
STEEL FS 4340  
FINISH  $\sqrt{125}$  OTHER SURFACES,  
AS SPECIFIED

5564142

R.I.A. FORGING SHOWN ON DRG. B7101539

SCALE  $\frac{2}{1}$

WAS C64142

INSCRIBE PART NO.

5564142

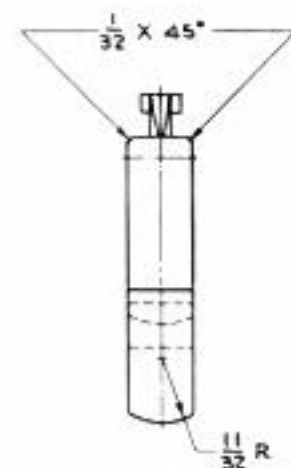
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL $\pm .005$ FRACTIONAL $\pm 1/64$ ANGULAR $\pm$		
DRAFTSMAN B.J.M.	CHECKER E.R.G.	C.H.F. DRAFTSMAN
SUBMITTED A.H. Roe ORD. DEPT. U. S. A.		
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE: Walter Ackerman ORD. DEPT. U. S. A.		
ORDNANCE DEPT., U. S. A.		

MADE AT ROCK ISLAND ARSENAL

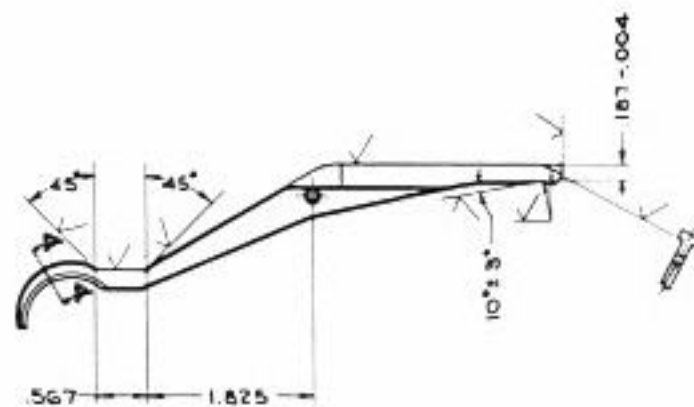
C5564142

[illegible]

Ⓢ PERMISSIBLE ANGLE TOLERANCE  
MUST BE WITHIN LIMITS PRESCRIBED  
BY LOCATING DIMENSIONS



**SECTION A-A**

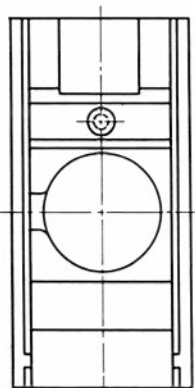
[illegible]SCALE  $\frac{2}{1}$ 

APRIL 4, 1927		CLASS	DIVISION	DRAWING	FILE
REVISIONS		TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL $\pm .008$ FRACTIONAL $\pm 1/64$ ANGULAR $\pm 5'$			
22	5-10-48				
DRG. PERTAINS TO		Draftsman M. E. B.	Checker <i>[Signature]</i>	L/C Inspector <i>[Signature]</i>	Chief Inspector <i>[Signature]</i>
51-10-46 51-83-4 51-84-4 51-114-4 51-125-4		SUBMITTED: <i>A. H. Roe</i>			
		EXAMINED: <i>Walter Ackerman</i>			
		ORD. DEPT. U. S. A. APPROVED BY ORDER OF THE CHIEF OF ORDNANCE: <i>[Signature]</i> ORD. DEPT. U. S. A.			
D5508476		ORDNANCE DEPT., U. S. A.			



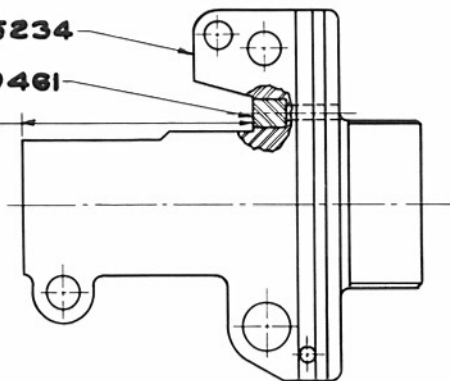
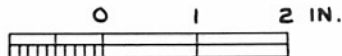


HEAT TREATMENT AND FINAL FINISH



BLOCK-D 6535234

PLATE-A 5160461

GRIND FLUSH  
TO  $2.521 \pm .006$ BLOCK, TRUNNION, ASSEMBLY (6147093

WAS B147093

B 6147093

PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED

BR.

ROCK.

SCL.

SEPT. 30, 1936

REVISIONS

7 5-10-48

DRG. PERTAINS TO

06535358 30 BMG M19A4  
(FXD)-(FLEX)  
06540989 30 BMG  
M19A3 (FXD)  
0714037 30 BMG  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL  $\pm$  —  
FRACTIONAL  $\pm$  —  
ANGULAR  $\pm$  —

DRAFTSMAN P.J.R.	TRACER O.K.	L.O.G. DRAFTSMAN
CHECKER L.S.	CHIEF DRAFTSMAN	

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

B6147093

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

A 5160461

MARCH 10, 1939

HEAT TREAT

Y. P.

RED.

SCL.

T. S.

BR.

EL 2

ROCK

C 58-61

REVISIONS

6 5-10-48

DRG. PERTAINS TO

B6147093

30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS

NOT OTHERWISE SPECIFIED

DECIMAL  $\pm$  —FRACTIONAL  $\pm$  —ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

M. J.

TRACER

O. K.

L'D'G DRAFTSMAN

CHECKED

L. S. C.

O. O.

CHIEF DRAFTSMAN

SUBMITTED:

A. H. Roe

ORD. DEPT., U. S. A.

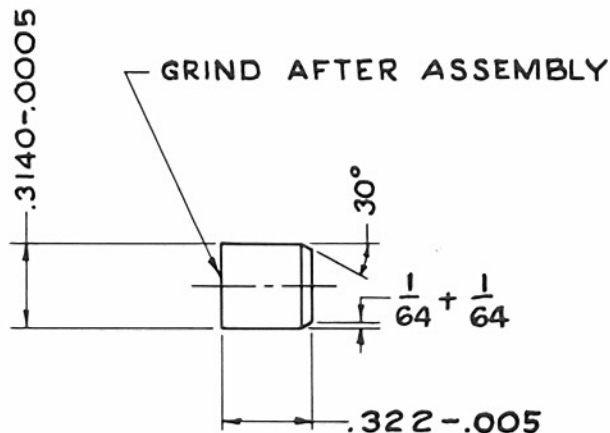
APPROVED BY ORDER OF THE CHIEF

OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



PLATE, BUNTER

STEEL FS 1095

FINISH 125/

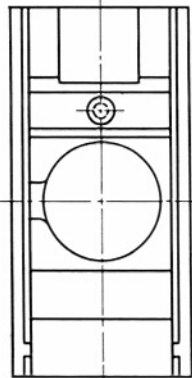
(5160461

SCALE  $\frac{2}{1}$ 

WAS A 160461

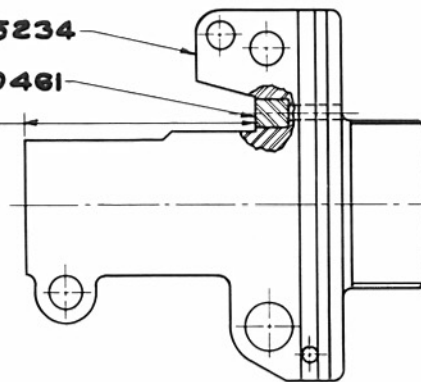
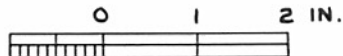
A 5160461

HEAT TREATMENT AND FINAL FINISH



BLOCK-D 6535234

PLATE-A 5160481

GRIND FLUSH  
TO  $2.521 \pm .006$ **BLOCK, TRUNNION, ASSEMBLY** (6147093PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED

BR.

ROCK.

SCL.

SEPT. 30, 1936

## REVISIONS

7 5-10-48

## DRG. PERTAINS TO

06535358 30 BMG M19A4  
(FXD)-(FLEX)  
06540989 30 BMG  
M19A5 (FXD)  
07114037 30 BMG  
M19A6

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL:  $\pm$  —  
FRACTIONAL:  $\pm$  —  
ANGULAR:  $\pm$  —

DRAFTSMAN P.J.R.	TRACER O.K.	L.O.G. DRAFTSMAN
CHECKER L.S.	CHECKER O.D.	CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Halter Ackerman

ORD. DEPT., U. S. A.

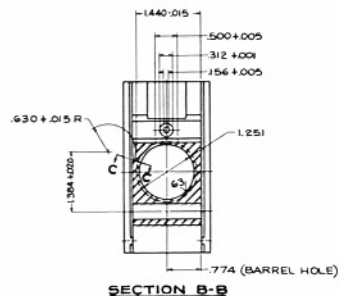
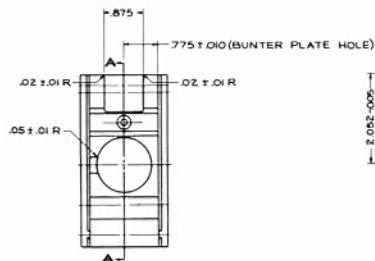
ORDNANCE DEPT., U. S. A.

WAS B147093

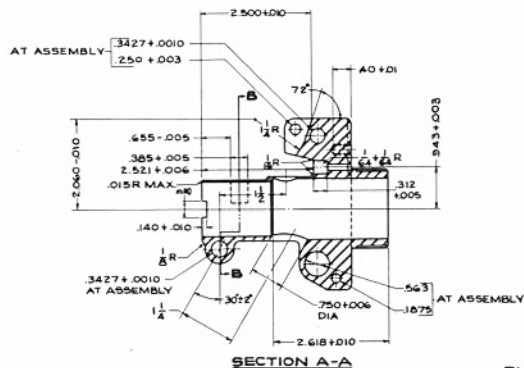
B 6147093

R6147093



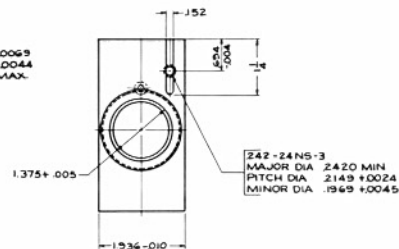
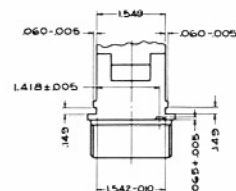


SECTION B-B

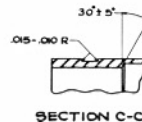


SECTION A-A

D5-22N5-3  
MAJOR DIA 1.7800 ± 0.009  
PITCH DIA 1.7505 ± 0.0044  
MINOR DIA 1.7242 MAX.



242-24N5-3  
MAJOR DIA 2.420 MIN  
PITCH DIA 2.149 ± 0.024  
MINOR DIA 1.969 ± 0.045



SECTION C-C

DO NOT INSCRIBE PART NO.

RIA FORGING SHOWN ON DRG C7E853

NOTE: WHEN USING MALLEABLE IRON SPECIAL CLASS B,  
BUNTER PLATE A516C461 AND MACHINING FOR SAME  
MAY BE OMITTED AND FRONT SURFACE OF FEEDWAY  
FLAME HARDENED TO A MINIMUM HARDNESS OF ROCK C39

BLOCK, TRUNNION  
STEEL F51050  
FINISH 125/V OTHER SURFACES, AS SPECIFIED

WAS D35234

SCALE 1

SEPTEMBER 30, 1936	CLARK	BRUNN	SHAWNEE	FILE
REVISIONS				
24 B-10-48				
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL 1/100 FRACTIONAL 1/16 ANGULAR 1/16				
REPLACES	REVISION	DATE	BY	REMARKS
655	Z.C.			
DRG. PERTAINS TO 65147053 21 WAVE				
SUBMITTED H.H. Roe				
EXAMINED H.H. Roe				
APPROVED BY ORDER OF THE CHIEF OF BUREAU H.H. Roe				
ORD. DEPT. U.S.A. ORD. DEPT. U.S.A. SCALE 1/16				

D6535234

ORDNANCE DEPT. U.S.A.

SCALE 1/16

HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B

PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED.

BR.

ROCK

SCL.

FEB. 1, 1938

REVISIONS

9	5-10-48		

DRG. PERTAINS TO

51-114-1	.30 BMG M19A5(FXD)
51-83-1	.30 BMG M19A4(FXD)
51-84-1	.30 BMG M19A4(FLEX)
51-10-1	.30 BMG M17A1(WC)
51-125-1	.30 BMG M19A6

DO

INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm$  —  
FRACTIONAL  $\pm$  —  
ANGULAR  $\pm$  —

DRAFTSMAN G.A.F.	TRACER O.K.	L'D'G DRAFTSMAN
CHECKER L.S.		CHIEF DRAFTSMAN

SUBMITTED:

*F.H. Roe*  
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

*Walter Ackerman*  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

BOLT-D6535408

PLATE-A135255

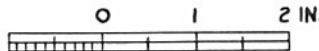
INSCRIBE PART NO.  $\frac{1}{16}$  HIGH

GRIND FLUSH WITH FACE OF BOLT

BOLT, ASSEMBLY (6147299

WAS B147299

B6147299



B6147299

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

JULY 15, 1931.

HEAT TREAT

Y.P.

RED.

ROCK.

C 54-59

REVISIONS

T.S.

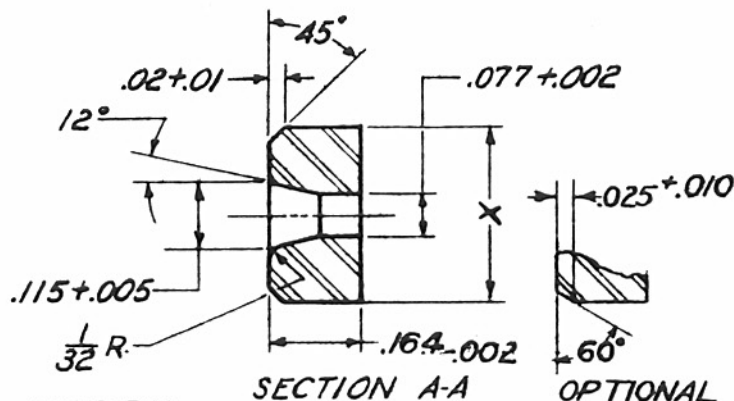
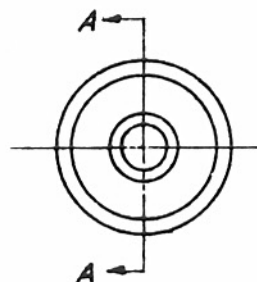
BR.

EL2

10 9-11-42

11 7-27-43

12 12-22-43

PLATE, RECOIL

X = .3125 - .0005

X = .3120 - .0005

X = .3130 - .0005

X = .3140 - .0005

X = .3150 - .0005

A 135255-12

A 135255A-12

A 135255B-12

A 135255C-12

A 135255D-12

STEEL-WD 1095

FINISH X

MANUFACTURING COMPONENT

TOLERANCE  $\pm .01$  ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED.

SUPERSEDES OLD TRACING A-135255

UNDER REVISION DATE OF SEPT. 11, 1942.

SCALE  $\frac{4}{1}$ 

SPRINGFIELD ARMORY

A135255

## DR'G. PERTAINS TO

ALL 30 BMG-M2

51-10 30BMG-M17A1 (WC)

51-83 30BMG-M19A4 (FXD)

51-84 30BMG-M19A4 (FLEX)

51-114 30BMG-M19A4S (FXD)

C3961 BOLT, ALTERNATE

FEED ASSEMBLY

B147299 BOLT, ASSEMBLY

51-125 30 BMG-M19A6

DFTSMAN

TRACER

LOG DFTSMAN

F.L.P.

F.L.P.

L.S.C.

CHECKER

L.S.C.

CHIEF DFTSMAN

SUBMITTED.

*Executive*

APPROVED BY ORDER OF THE CHIEF OF ORDNANCE:-

*Wm. L. H. T.*

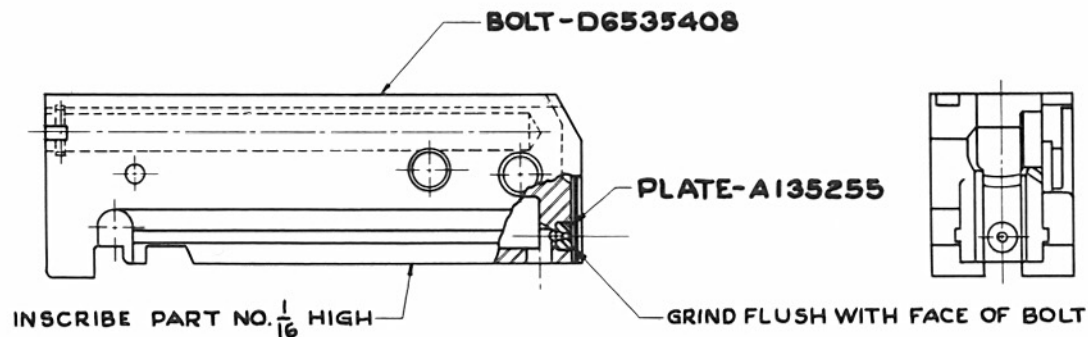
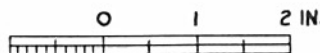
COL. ORD. DEPT.

ORDNANCE DEPT., U. S. A.



HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B

**BOLT, ASSEMBLY** (6147299

WAS B147299

**B6147299**PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED.

BR.

ROCK

SCL.

FEB. 1, 1938

## REVISIONS

9 5-10-48

## DRG. PERTAINS TO

51-114-1	.30 BMG M19A5(FXD)
51-83-1	.30 BMG M19A4(FXD)
51-84-1	.30 BMG M19A4(FLEX)
51-10-1	.30 BMG M17A1(WC)
51-125-1	.30 BMG M19A6

DO

INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL  $\pm$  —

FRACTIONAL  $\pm$  —

ANGULAR  $\pm$  —

DRAFTSMAN G.A.F.	TRACER O.K.	L'D'G DRAFTSMAN
CHECKER <i>[Signature]</i>	CHECKER <i>[Signature]</i>	CHIEF DRAFTSMAN

SUBMITTED:

*F.H. Roe*

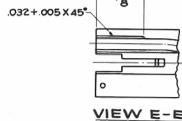
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ashmun*

ORD. DEPT., U. S. A.

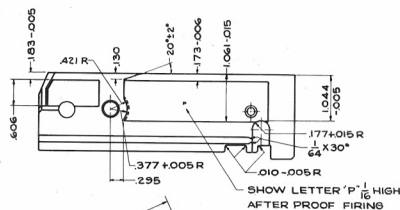
ORDNANCE DEPT., U. S. A.

B6147299

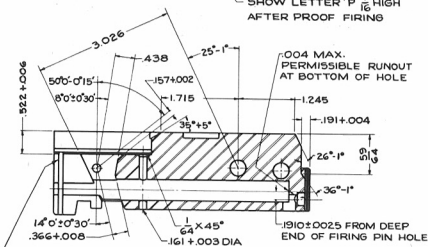


-.125+.005 (ALTERNATIVE - MAY BE OMITTED IF DESIRED)

### SECTION C-C

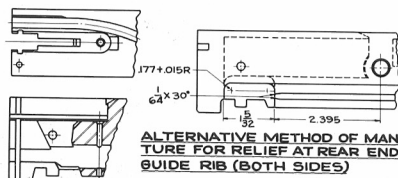


SHOW LETTER 'P'  $\frac{1}{16}$  HIGH  
AFTER PROOF FIRING



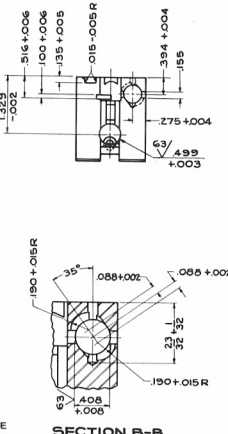
-NOTE:  
SEE ALTERNATIVE METHOD  
OF MACHINING GEAR SLOT

**SECTION A-A**

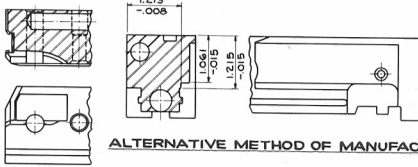


ALTERNATIVE METHOD OF MANUFACTURE FOR RELIEF AT REAR END OF GUIDE RIB (BOTH SIDES)

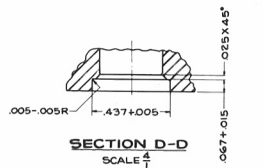
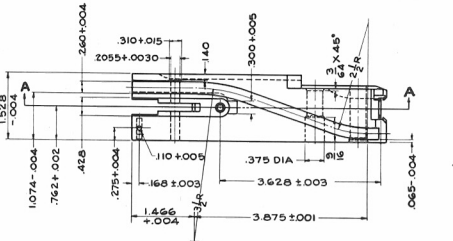
VIEWS SHOWING ALTERNATIVE  
METHOD OF MANUFACTURE FOR 35° CLEARANCE CUT



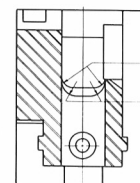
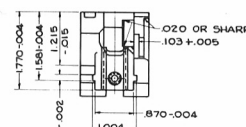
## SECTION B-F



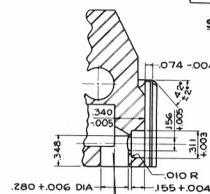
### ALTERNATIVE METHOD OF MANUFACTURE



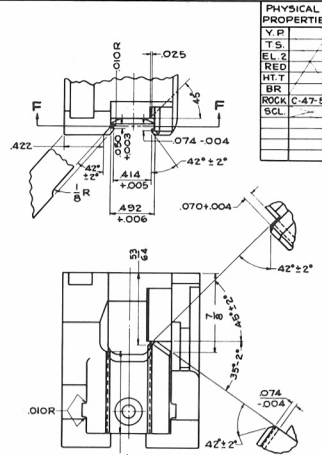
## SECTION



SECTION F-1



**SECTION THRU FACE OF BOLT**



ENLARGED VIEWS OF

## HISTORICAL

-175-020 B (AT TOP OF CONE)

INSCRIBE PART NO.

[illegible]

D6535408

**BOLT**  
STEEL F6X4340  
FINISH 125/OTHER SURFACES, AS SPECIFIED

6535408

WAS D35408

SCALE  $\frac{1}{2}$ 

D	6535408
---	---------

ORDNANCE DEPT. U.S.A.

MADE AT ROCK HAVEN, ALABAMA

HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B

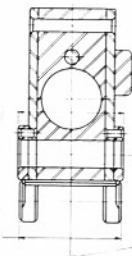
PHYSICAL PROPERTIES	
VP	
TS	
EL 2	
RED	
BR	
ROCK	
SCL	

\*PLATE, ASSEMBLY-C5564222

RIVET-A5020522

PLATE-D6535393

RIVET-A5020711

RIVET-A5160656  
(GRIND FLUSH INSIDE & OUTSIDE)NOTE A  
4 OF HOLE MUST BE SQUARE WITH  
THIS 4 WITHIN .003 IN SIX INCHESSCREW UP TIGHT AGAINST SHOULDER AND  
SWEAT THREADS WITH HIGH TEMPERATURE  
SOLDER (500°F MINIMUM MELTING POINT)2.355  
1.180-.005FACES OF REAR  
MOUNTING LUGS  
MUST BE CENTRAL  
WITH FACES AT FRONT  
MOUNTING HOLES  
WITHIN .010NOTE B  
4 OF MOUNTING HOLE MUST  
BE SQUARE WITH THIS 4  
WITHIN .003 IN SIX INCHES

SECTION A-A

DRAW SCREW UP TIGHT;  
BACK OFF  $\frac{1}{2}$  TO  $\frac{1}{4}$  TURN AND  
STAKE IN TWO PLACES ON  
INSIDE OF CASING

\*PLATE, ASSEMBLY-C5564224

CAM-C5564133

SCREW-A5020527

\*BLOCK, ASSEMBLY-B6470293

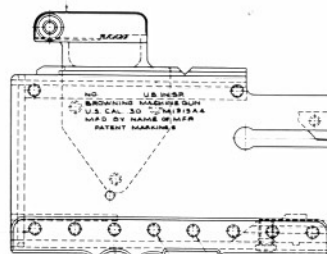
RIVET-A5020601 (GRIND FLUSH OUTSIDE)

RIVET-A5020600 (GRIND FLUSH OUTSIDE)

SCREW-BCLX1.1, 100866 (STAKE)  
JACKET-C5562503

RIVET-A5152737

PLATE-D6535392

440+.002  
11.531  
11.500GRIND FLUSH INSIDE AND  
OUTSIDE (2 RIVETS)  
GRIND FLUSH INSIDE  
(4 RIVETS)

11.4812 REF

THE LIMITS OF NON PARALLELISM AND SKEWING  
OF 4 OF REAR MOUNTING HOLE WITH RESPECT TO  
4 OF FRONT MOUNTING HOLE AS MEASURED AT THE  
FACES OF THE REAR MOUNTING LUGS, SHALL BE A  
MAX. .006 IN SIX INCHES AND SHALL BE WITHIN  
THESE PRESCRIBED LIMITSSHOW LETTER  
P  $\frac{1}{8}$ " HIGH AFTER  
PROOF FIRINGSQUARENESS OF 4 OF FRONT  
MOUNTING HOLE AS MEASURED  
AT FACES OF ADAPTER PLATES  
SHALL BE WITHIN THESE PRE-  
SCRIBED LIMITS AND SHALL  
CONFORM TO LIMITS SPECIFIED  
IN NOTE A AND NOTE B

\*FINDING DIAGRAM

50 INSCRIBE PART NO  
DO NOT

SEPTEMBER 30, 1934	CLASS	DIVISION	DRAWING	FILE
REVISIONS				
17.5-4-45				
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMALS: $\pm .005$ FRACTIONS: $\pm \frac{1}{16}$ " ANGULAR: $\pm 2^\circ$				
DESIGNED BY	WCO	ZC	CHECKED BY	TEST REPORT
DRAWN BY	WCO	ZC	CHECKED BY	TEST REPORT
ORG. PERTAINS TO				
51-B-3-1	51-B-4-1	51-B-5-1	51-B-6-1	51-B-7-1
SUBMITTED				
EXAMINED				
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE				
ORD. DEPT. U.S.A.				
ORD. DEPT. U.S.A.				

CASING, ASSEMBLY 6535358

WAS D35358

0 1 2 3 4 5 6 7 8 9 10 11 IN.

D 6535358

ORDNANCE DEPT. U.S.A.

MADE BY ROCK ISLAND TOOL CO.



A5020522

APRIL 4, 1927

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

12 5-10-48

DRG. PERTAINS TO

D6535358

.30 BMG 19A4  
(FXD) & (FLEX)

D6540989

.30 BMG  
M19A8 (FXD)

D7114037

.30 BMG  
M19A6

D6901301

.30 BMG  
M17A1 (WC)INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm \frac{\quad}{\quad}$   
ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

J.J.V.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

L.S.C.

CHIEF DRAFTSMAN

O.O.

SUBMITTED:

A.H. Roe

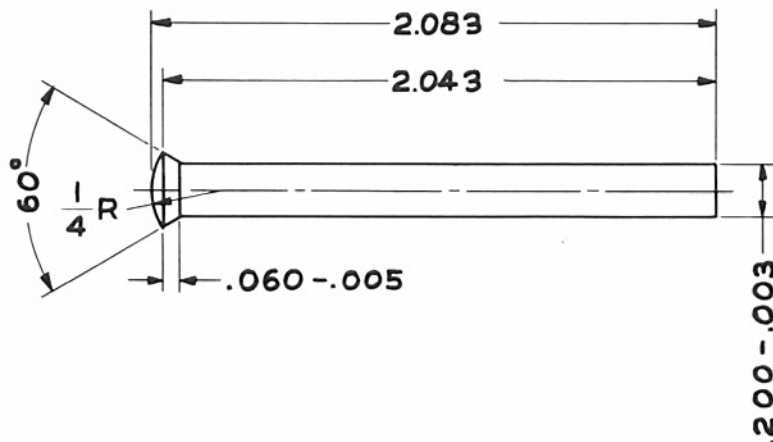
ORD. DEPT.. U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT.. U. S. A.

ORDNANCE DEPT., U. S. A.

**RIVET, TOP PLATE, LONG****STEEL FS 1035**FINISH  $\frac{125}{\sqrt{\quad}}$ 

(5020522)

WAS A20522

SCALE  $\frac{2}{1}$ 

A

5020522

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

A5020527

APRIL 4, 1927

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

15 5-10-48

DRG. PERTAINS TO

D7114037

.30 BMG  
M19A6

D6901301

.30 BMG  
M17A1(WC)

D6540989

.30 BMG  
M19A5(FXD)

D6535358

.30 BMG 19A4  
(FXD)&(FLEX)

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

R.G.D.

TRACER

A.V.C.

L'D'G DRAFTSMAN

CHECKER

W.B.H.

CHIEF DRAFTSMAN

CHIEF DRAFTSMAN

SUBMITTED:

A.M. Roe

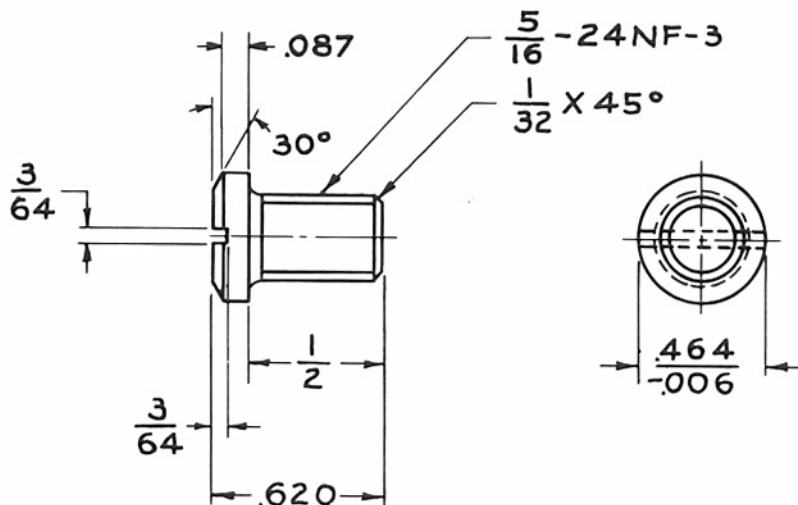
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

SCREW, BREECH LOCK CAMSTEEL FSX1315

FINISH 125/

5020527

SCALE  $\frac{2}{1}$ 

WAS A20527

A 5020527

A 5020600

JUNE 1, 1931

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

11 5-10-48

DRG. PERTAINS TO

D6535358

.30 BMG 19A4  
(FXD) & (FLEX)

D6540989

.30 BMG  
M19A5 (FXD)

D7114037

.30 BMG  
M19A6

D6901301

.30 BMG  
M1A1 (WC)~~DO~~INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL ± —

FRACTIONAL ± 1/64

ANGULAR ± 5°

DRAFTSMAN

W.C.O.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

L.S.C.

CHIEF DRAFTSMAN

0.0.

SUBMITTED:

A.H. ROE

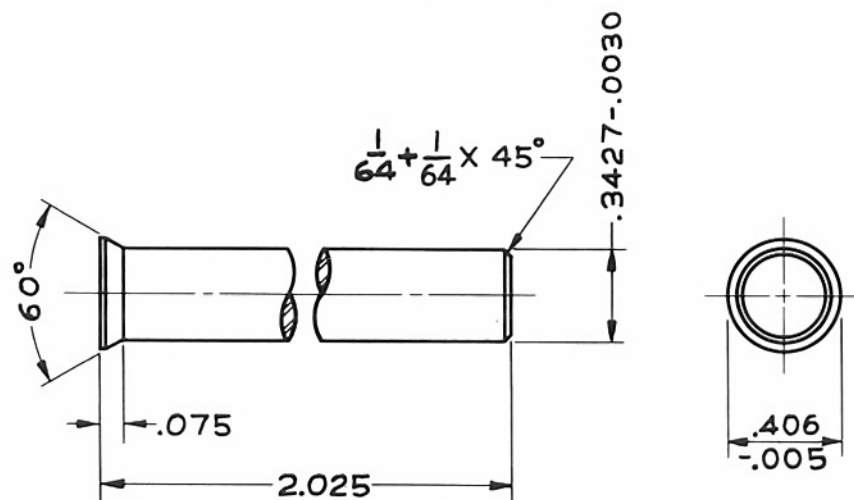
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**RIVET, SIDE PLATE, LARGE**

STEEL FS1035

FINISH 125/

5020600

WAS A20600

SCALE  $\frac{2}{1}$ 

A 5020600

MADE AT ROCK ISLAND ARSENAL



A 5020601

JUNE 1, 1931

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

125-10-48

DRG. PERTAINS TO

D6535 358

30 BMG 19A4  
(FXD) (FLEX)

D6540 989

30 BMG  
M19A5 (FXD)

D7114 037

30 BMG  
M19A6

D6901 301

30 BMG  
M17A1 (WC)

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

W.C.O.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

CHIEF DRAFTSMAN

SUBMITTED:

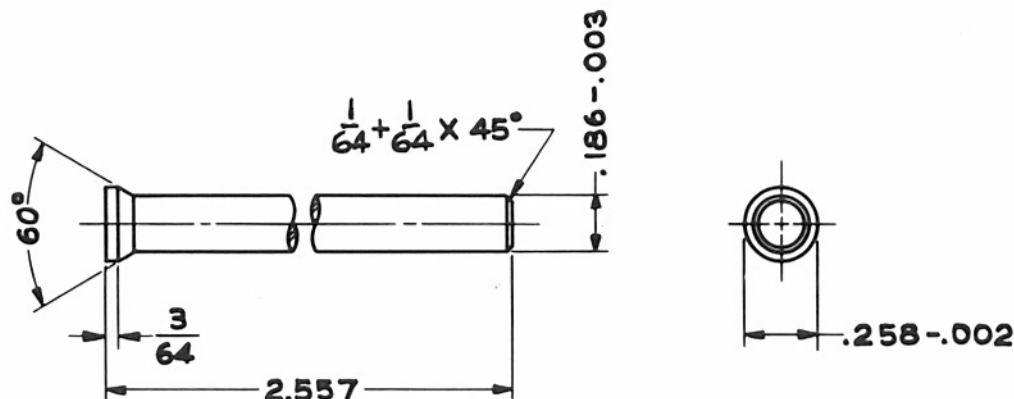
*A.H. Roe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



RIVET, SIDE PLATE, SMALL

STEEL FS1035

FINISH 125/

5020601

WAS A20601

SCALE  $\frac{2}{1}$ 

A 5020601

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

A5020711

APRIL 4, 1927

## REVISIONS

195-10-48

## DRG. PERTAINS TO

D6535358

30 BMG 19A4  
(FXD) & (FLEX.)

D7114037

30 BMG  
M19A6

D6901301

30 BMG  
MITAI (WC)INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

E.L.L.

TRACER

A.V.C.

L'D'G DRAFTSMAN

CHECKER

E.W.H.

O.D.

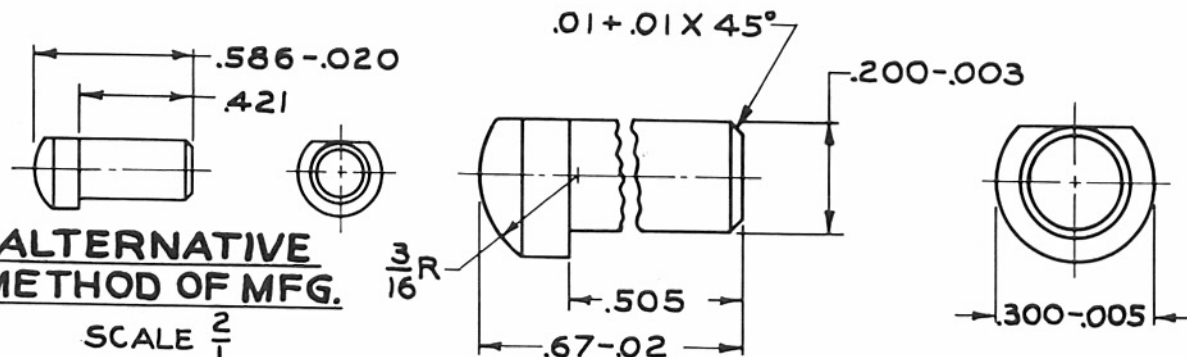
CHIEF DRAFTSMAN

SUBMITTED:

*A.W. Roe*APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

ALTERNATIVE  
METHOD OF MFG.SCALE  $\frac{2}{1}$ RIVET, TOP PLATE, SHORT  
STEEL FS1035FINISH  $\frac{125}{\sqrt{}}$ 

(5020711)

WAS A20711

SCALE  $\frac{4}{1}$ 

A 5020711

A5152737

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

FEB. 1, 1938

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

8 5-10-48

DRG. PERTAINS TO

D6535358

.30 BMG 19A4  
(FXD) & (FLEX)

D6540989

.30 BMG  
M19A5 (FXD)

D7114037

.30 BMG  
M19A6

D6901301

.30 BMG  
M17A1(WC)INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm -$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

TRACER

L'D'G DRAFTSMAN

J.A.B.

E.R.G.

CHECKER

O.O.

CHIEF DRAFTSMAN

SUBMITTED:

A.W. Roe

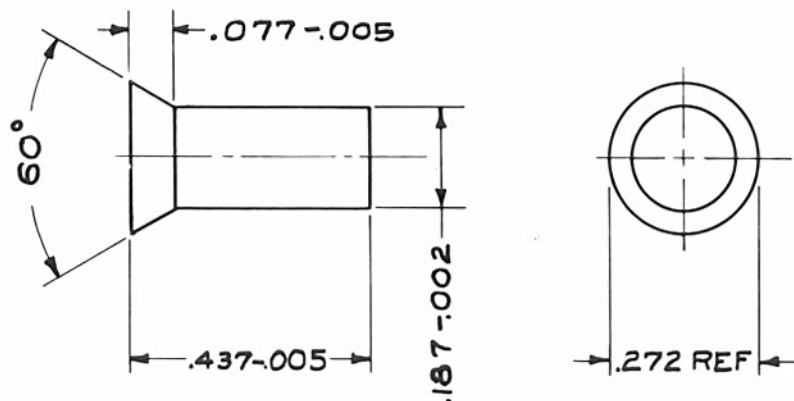
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**RIVET, BOTTOM PLATE**

STEEL FS1035

FINISH 125

5152737

WAS A152737

SCALE  $\frac{4}{1}$ 

A 5152737



A 5160656

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

MARCH 10, 1939

## REVISIONS

4 5-10-48

## DRG. PERTAINS TO

D6535358

.30 BMG M19A4  
(FXD) & (FLEX)

D7114037

.30 BMG  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm$  —ANGULAR  $\pm 2^\circ$ 

DRAFTSMAN

M.T.

TRACER

O.K.

L'D'G DRAFTSMAN

CHECKED

LSC *EWK*

0.0.

CHIEF DRAFTSMAN

SUBMITTED:

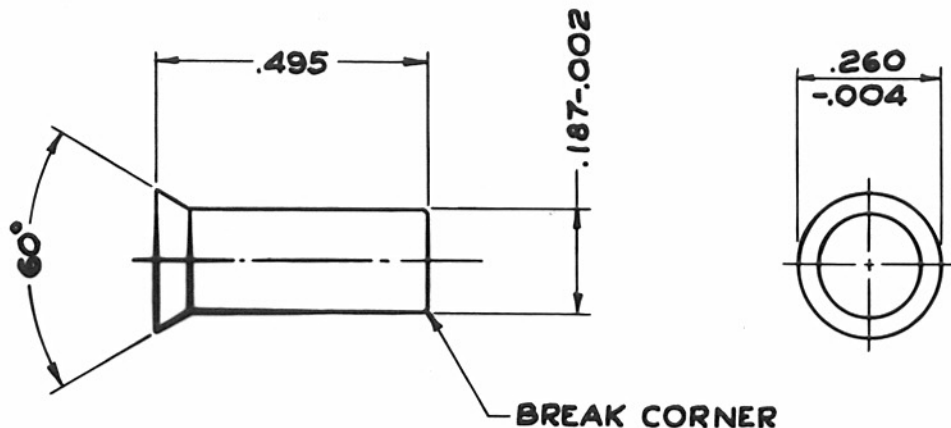
*A.H. Roe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

RIVET, SIGHT BRACKET (5160656)STEEL FS1035

FINISH 125/



WAS A160656

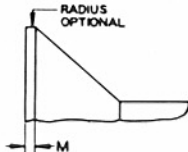
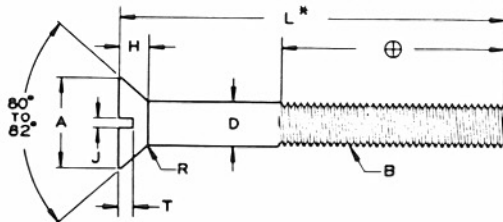
SCALE  $\frac{4}{1}$ 

A 5160656

SCREW, MACHINE, FLAT HD. (NF-2)  
STEEL

BCLXI.1

ORDNANCE DEPT. STANDARDS (COMMERCIAL)

APPROVED 7-25-31  
DATE

NOMINAL SIZE	#10	#12	1/4	5/16	3/8			
B THREADS PER INCH	32	28	28	24	24			
D DIAMETER OF BODY	{ Max. .1900 Min. .1670	{ Max. .2160 Min. .1897	{ Max. .2500 Min. .2237	{ Max. .3125 Min. .2821	{ Max. .3750 Min. .3446			
A DIAMETER OF HEAD	{ Sharp Max. .385 Sharp Min. .350 Abs. Min. .348	{ Max. .438 Min. .410 Abs. Min. .397	{ Max. .507 Min. .477 Abs. Min. .462	{ Max. .635 Min. .600 Abs. Min. .581	{ Max. .762 Min. .722 Abs. Min. .700			
M WIDTH OF FLAT	{ Max. .007 Min. .116	{ Max. .008 Min. .132	{ Max. .009 Min. .153	{ Max. .011 Min. .191	{ Max. .013 Min. .230			
H HEIGHT OF HEAD	{ Max. .098 Min. .060	{ Max. .112 Min. .067	{ Max. .131 Min. .075	{ Max. .165 Min. .084	{ Max. .200 Min. .094			
J WIDTH OF SLOT	{ Max. .050 Min. .053	{ Max. .056 Min. .060	{ Max. .064 Min. .070	{ Max. .072 Min. .088	{ Max. .081 Min. .106			
T DEPTH OF SLOT	{ Max. .034 Min. .062	{ Max. .039 Min. .071	{ Max. .046 Min. .071	{ Max. .053 Min. .083	{ Max. .070 Min. .083			
R RADIUS								

L LENGTH

ORDNANCE PART NUMBER - STANDARDS - PLAIN FINISH

3/16	420601							
1/4	100666	420602						
5/16	112878	420603	420620					
3/8	100667	420604	420621					
7/16	117633	420605	420622	420631				
1/2	100668	420606	191579	420632		420644		
5/8	100669	420607	178743	420634		119481		
3/4	100670	420608	420623	420635		177945		
7/8	100671	420609	190738	137504		420645		
1	100672	420610	188739	191746		111636		
1-1/8	100673	420611	420624	190799		420646		
1-1/4	100674	420612	188741	420636		125910		
1-1/2	100676	420613	216319	420637		190452		
1-3/4	100677	420614	420625	420638		190265		
1-7/8						420651		
2	100678	420615	420626	420639		192344		
2-1/4	117634	420616	420627	420640		420647		
2-1/2	117635	420617	420628	420641		420648		
2-3/4	117636	420618	420629	420642		420649		
3	117637	420619	420630	420643		420650		

MATERIAL: STEEL, COMMERCIAL, WD-1010 - 1020.

DIMENSIONS IN INCHES.

NOMENCLATURE PATTERN: SCREW, MACHINE, FLAT HD, S., PLAIN FINISH, #10 - 32NF-2 x 1", DRG. BCLXI.1, PART NO. 100672.




⊕ LENGTH OF THREAD: ON SCREWS 2" LONG OR SHORTER, THREADS SHALL EXTEND TO WITHIN TWO THREADS OF THE BEARING SURFACE OF THE HEAD. LONGER LENGTHS SHALL HAVE A MINIMUM COMPLETE THREAD LENGTH OF 1-3/4"

\* TOLERANCE ON LENGTH: UP TO 1" MINUS 1/32; OVER 1" TO 2" MINUS 1/16; OVER 2" MINUS 3/32.



FINISH ☒ TO BE <sup>125</sup>STEEL, OTHER SURFACES, AS SPECIFIED

SCALE  $\frac{2}{1}$ 

TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED		
DECIMAL : .005 FRACTIONAL : 1/64 ANGULAR : 5°		
DRAFTSMAN C. P. L.	TRACER Z. C.	L.D. DRAFTSMAN _____
CHECKER _____		CHIEF DRAFTSMAN _____
SUBMITTED: 		
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE 		
GND. DEPT. U. S. A. ORDNANCE DEPT., U. S. A.		

DO NOT INSCRIBE PART NO

APPROVED BY ORDER OF THE CHIEF

OF ORDINANCE.  
*Attest:* \_\_\_\_\_

**Grade** \_\_\_\_\_  
ORG. DEPT. M.B.

ORDNANCE DEPT. U. S. A.

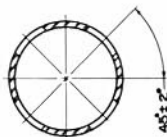
ORDNANCE DESIG. U. S. A.

PHYSICAL PROPERTIES		SEPTEMBER 30, 1936	
		REVISIONS	
Y. P.		9	540-44
T. S.			
EL. 2			
RED			
BR.			
ROCK.			
SCL.			

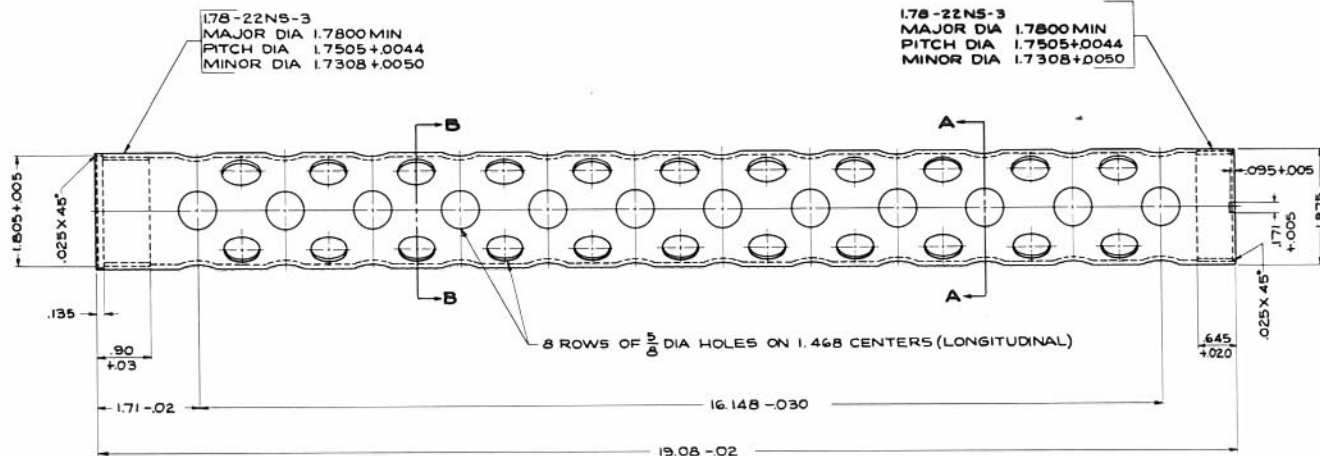
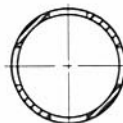
DRG. PERTAINS TO

06535350 .30 BM-18  
M19A3 (FAD) (LLD)  
06540389 .30 BM-18  
M19A3 (FAD)

SECTION B-B



SECTION A-A



**JACKET, BARREL**  
SEAMLESS OR ELECTRIC RESISTANCE WELDED STEEL TUBING, WD1035 5562503  
 $1\frac{1}{8}$  OD X .083 (NO. 14 BW GAGE) WALL  
FINISH 125

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± .008  
FRACTIONAL ± .005  
ANGULAR ± 5°

DESIGNED BY: T.C. C.E. GRAPPEL  
M.T. Z.C.  
CHECKED BY: C.E. GRAPPEL  
SUBMITTED: *AMR*

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE  
*Walter Anderson*  
ORD. DEPT. U. S. A.  
MADE AT ROCK ISLAND ARMO

WAS C62503

DO NOT INSCRIBE PART NO.

SCALE 1

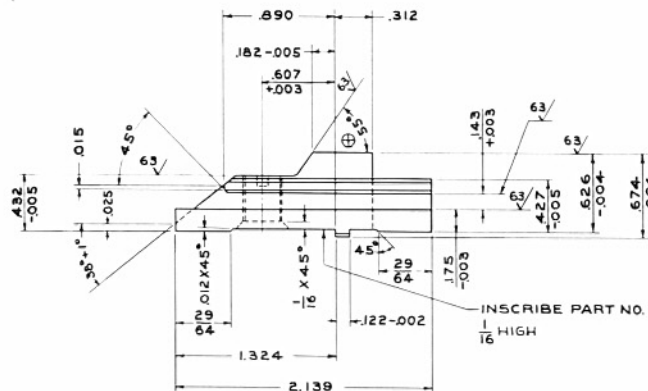
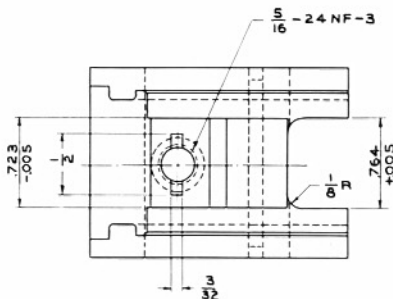
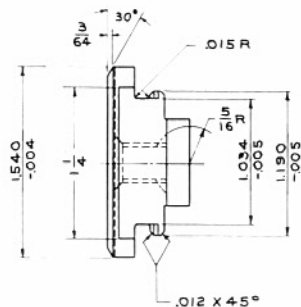
C 5562503

C5562503



HEAT TREATMENT AND FINAL FINISH

HEAT TREAT

CAM, LOCK, BREECH  
STEEL FS 4140

5564133

FINISH 125/ V, OTHER SURFACES, AS SPECIFIED

⊕ PERMISSIBLE ANGLE TOLERANCES NOT  
SPECIFIED MUST BE WITHIN LIMITS  
PERSCRIBED BY LOCATING DIMENSIONS.

PHYSICAL PROPERTIES		FEBRUARY 1, 1938	
		REVISIONS	
Y. P.		17	5-10-48
T. S.			
EL. 2			
RED			
BR			
ROCK	C48-54		
SCL			

DRG. PERTAINS TO

06535358	30 BMG M1944 (F&D) & (F&A)
06540369	30 BMG M1948 (F&D)
07114037	30 BMG M1946
06901301	30 BMG M17A1 (WC)

TOLERANCE ON DIMENSIONS,  
NOT OTHERWISE SPECIFIED  
DECIMAL: .005  
FRACTIONAL: 1/64  
ANGULAR: 5°

DRAWN BY	TRACED	1. E. R. DRAFTSMAN
CSS	AVC	
TESTED		1. E. R. DRAFTSMAN

SUBMITTED:

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE.

Walter A. Johnson  
CHIEF, U. S. A.

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

WAS C64133

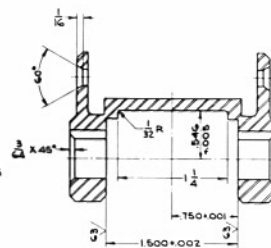
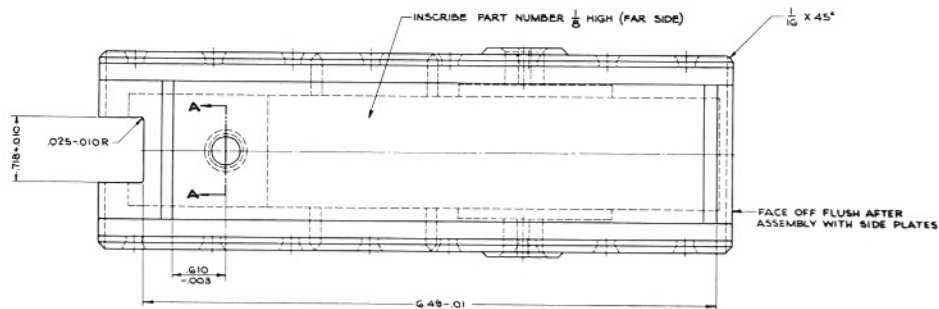
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SCALE 2/1

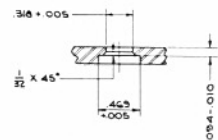
C 5564133

C5564133

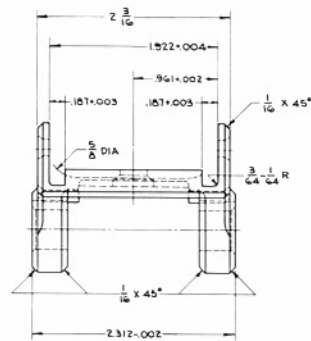
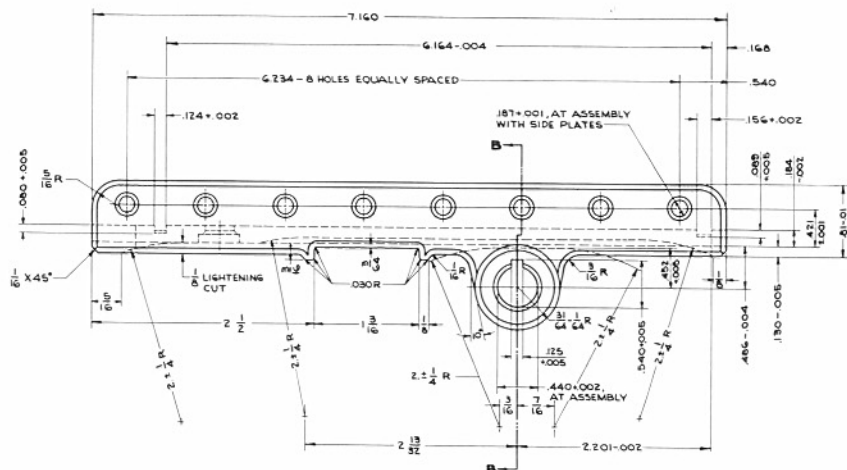




**SECTION B-B**



SECTION A-A



PLATE, BOTTOM  
STEEL FB1035

6535392

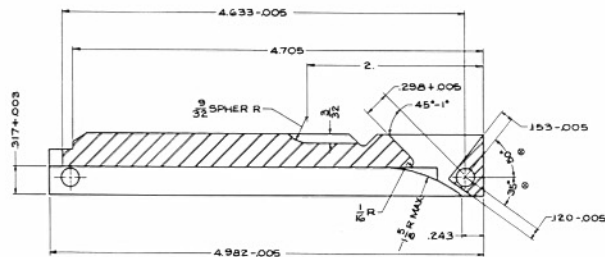
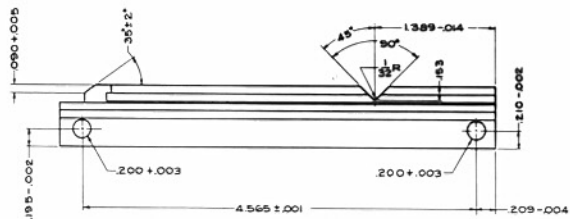
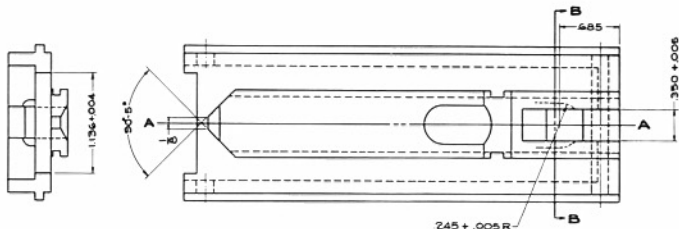
FINISH <sup>125</sup>/<sub>16</sub> OTHER SURFACES, AS SPECIFIED

R.I.A. FORGING SHOWN ON DRG CFB46A

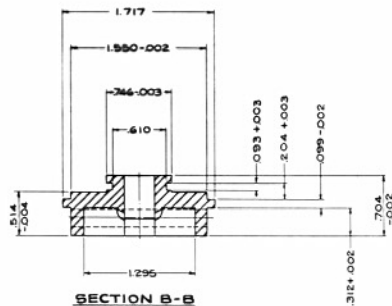
SCALE  $\frac{2}{1}$   
WAS D35392

<b>FEBRUARY 1, 1956</b>	CLASS	DIVISION	SERIALING	FILE
REVISONS				
<b>17 5-10-48</b>				
	TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMALS ± .010 FRACTIONS ± 1/64" ANGULAR ± .5°			
	TOLERANCES	FINISHES	TYPE SHIPMENTS	
	J.V.V.	SHARP		
	OTHER		DRG. SHIPPED	
	<i>Walter Aikman</i>			
	SUBMITTED:			
	EXAMINED:			
	APPROVED BY ORDER OF THE CHIEF OF BUREAU:			
	<i>Walter Aikman</i>			
	DATE: FEB. 01, 1956			
<b>D6535392</b>	ORDNANCE DEPT., U.S.A. ALBANY, NEW YORK			

HEAT TREATMENT &amp; FINAL FINISH

CARBON CASE FRONT HALF ONLY  
.004 TO .008 DEEP (ROCK A75-80)

SECTION A-A



SECTION B-B

PLATE TOP  
STEEL P. 310.45  
FINISH 125

6535393

PERMISSIBLE ANGLE TOLERANCES NOT SPECIFIED  
MUST BE WITHIN LIMITS PRESCRIBED BY LOCATING  
DIMENSIONS.

WAS D35393

SCALE 2

INSCRIBE PART NO.

DO NOT

FEBRUARY 1, 1936		CLAIM	DESIGN	SHOWN	FILE
REVISIONS					
19	5-10-44				
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMALS 1/1000 FRACTIONS 1/16 ANGULARS 1° 1/4"					
REPRESENT	C.S.S.	Z.C.	THE REPRESENT		
SUBMITTED					
DRG. PERTAINS TO D5901301 - 21 M2 D714037 - 25 M2 D653535 - 26 M2 D654098 - 27 M2					
EXAMINED					
APPROVED BY ORDER OF THE CHIEF OF BUREAU Walter Anderson ORD. DEPT., U.S.A.					
ORD. DEPT., U.S.A.					
ORD. DEPT., U.S.A.					
ORD. DEPT., U.S.A.					

D6535393

MADE AT ROCK ISLAND ARSENAL

D6535393



HEAT TREATMENT AND FINAL FINISH

PLATE-B6008823

PLATE-B6008822

BOLT-B6008824

SPRING-A6008825

PIN-BFAXI, 137142

NUT-BBFXI, 125016

CATCH, COVER (6008757

0 1 2 IN.

PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED

BR.

ROCK.

SCL.

SEPT. 23, 1932

## REVISIONS

9 5-10-48

## DRG. PERTAINS TO

51-125-1

30 BMG  
M19A6

51-24-1

30 BMG  
M19A4(FLEX)

51-10-1

30 BMG  
M17A1(WC)

51-83-1

30 BMG  
M19A4(FXD)INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DESIGNER	TRACER	L.T.G. DRAFTSMAN
T.J.C.	M.C.	
CHECKER		CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT. - U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT. - U. S. A.

ORDNANCE DEPT., U. S. A.

WAS B8757

B 6008757

B6008757

A 6008825

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

SEPT. 23, 1932

HEAT AT 450° F IN OIL FOR 30 MINUTES  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

## REVISIONS

13 5-10-48

## DRG. PERTAINS TO

B6008757

30 BM6-MITAIWC  
M19A4(FXD)  
M19A4(FLEX)  
M19AG

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL ± -

FRACTIONAL ± -

ANGULAR ± -

DRAFTSMAN

W.L.M.

TRACER

M.C.

L'D'G DRAFTSMAN

CHECKER

W.D.H.

CHIEF DRAFTSMAN

## SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

DIAMETER OF WIRE \_\_\_\_\_ .100-.002  
TOTAL NUMBER OF COILS \_\_\_\_\_ 4 1/2  
MINIMUM INSIDE DIAMETER, FREE \_\_\_\_\_ .45  
OUTSIDE DIAMETER, FREE \_\_\_\_\_ .660±.010  
MAX. OUTSIDE DIA AT MIN OPERATING HEIGHT \_\_\_\_\_ .672  
FREE LENGTH \_\_\_\_\_ 2 1/32 ± 1/32  
TYPE OF ENDS \_\_\_\_\_ SQ & GD  
WOUND \_\_\_\_\_ R.H.  
MEAN ASSEMBLED HEIGHT \_\_\_\_\_ .450  
MIN LOAD AT MEAN ASSEMBLED HEIGHT \_\_\_\_\_ 62. ± 6. LB  
MIN OPERATING HEIGHT \_\_\_\_\_ 7/16  
LB PER INCH OF SPRING DEFLECTION \_\_\_\_\_ 283.1  
SPRING FUNCTIONS OVER ROD \_\_\_\_\_ .440  
CALCULATED MAX. SOLID HEIGHT \_\_\_\_\_ .415

CAUTION: DO NOT COMPRESS SOLID.

**SPRING, COVER CATCH**

SPRING STEEL WIRE WD1085 SPECIAL-CLASS A

6008825

WAS B8825

A 6008825

HEAT TREATMENT AND FINAL FINISH

PLATE-B6008823

PLATE-B6008822

BOLT-B6008824

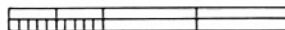
SPRING-A6008825

PIN-BFAXI, 137142

NUT-BBFXI, 125016

CATCH, COVER (6008757

0 1 2 IN.



## PHYSICAL PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

SEPT. 23, 1932

## REVISIONS

9 5-10-48

## DRG. PERTAINS TO

51-125-1 30 BMG M19A6  
51-24-1 30 BMG M19A4(FLEX)  
51-10-1 30 BMG M17A1(WC)  
51-83-1 30 BMG M19A4(FXD)
INSCRIBE PART NO.  
DO NOT
TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN T.J.C. TRACER M.C. L.D. DRAFTSMAN  
CHECKER G.D. CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT. - U. S. A.

APPROVED BY ORDER OF THE CHIEF OF ORDNANCE:

Walter A. ...  
ORD. DEPT. - U. S. A.

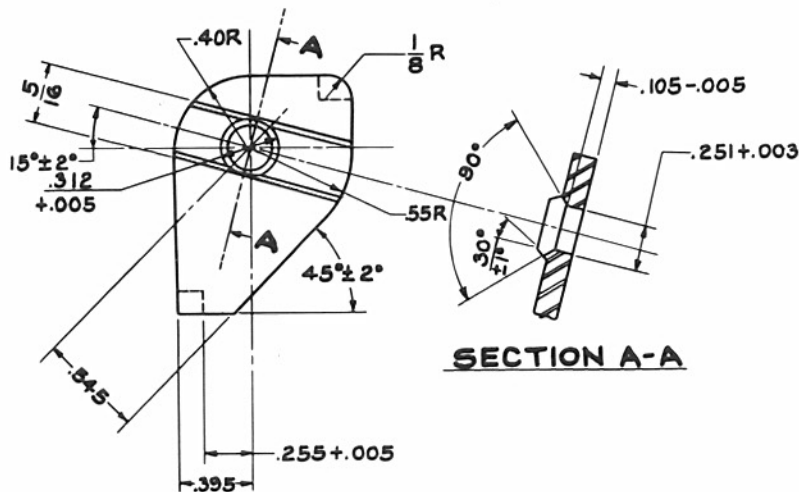
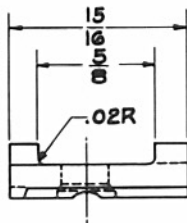
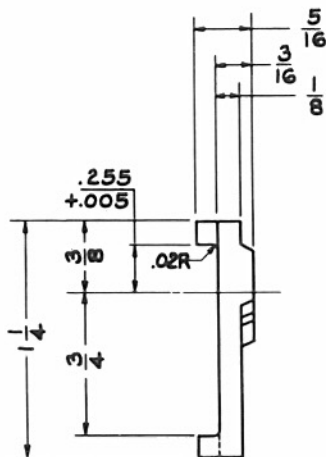
ORDNANCE DEPT., U. S. A.

WAS B8757

B 6008757

B6008757

HEAT TREAT  
TYPE II FINISH, CLASS B



**SECTION A-A**

**PLATE, FIXED**  
**STEEL FS4G15**  
**FINISH <sup>125</sup>✓**

6008822

WAS B8822

SCALE  $\frac{2}{1}$  B 6008822

## C.C.

015 TO 92
-----------

SEPT. 23, 1932

## REVISIONS

14	5-10-48
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DRG. PERTAINS TO

B6008757

.30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 5^\circ$

DRAFTSMAN	TRACER	L'D-G DRAFTSMAN
-----------	--------	-----------------

F.J.C.	M.C.
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96	96
97	97
98	98
99	99
100	100

CHECKER	CHIEF DRAFTSMAN
---------	-----------------

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:-

Walter Ackerman  
ORD. DEPT., U. S. A.

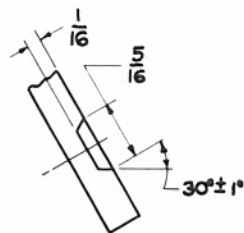
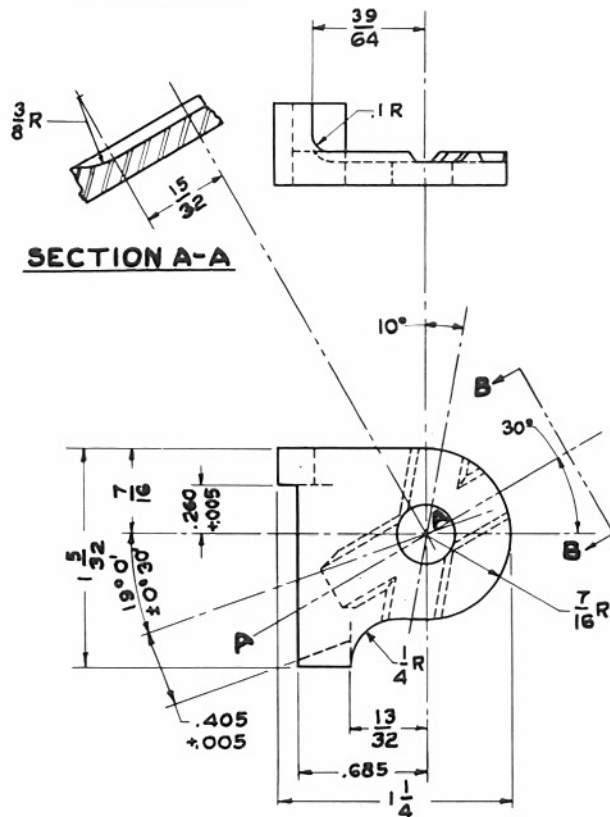
ORDNANCE DEPT., U. S. A.

**228809**

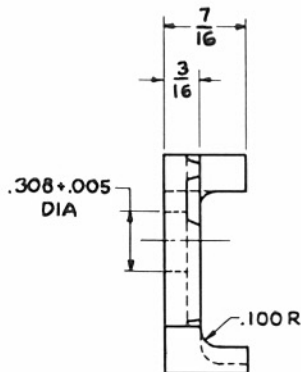


HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS B



VIEW B-B



**PLATE, MOVABLE** 6008823  
STEEL FS 4615  
FINISH 125/

R.I.A. FORGING SHOWN ON A 7101646

WAS B 8823

SCALE  $\frac{2}{1}$

B 6008823

PHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	A78-83
SCL.	
C. C.	.015 TO .020 DEEP

SEPT. 23, 1932

REVISIONS

15	5-10-48		

DRG. PERTAINS TO

B6008757 .30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± .005  
FRACTIONAL ± 1/64  
ANGULAR ± 2°

DRAWN 7/2 C	TRACED O.K.	L.D. DRAFTER
CHECKED ME	APPROVED S.S.	CHIEF DRAFTER

SUBMITTED:  
*A.H. Roe*  
ORD. DEPT., U. S. A.

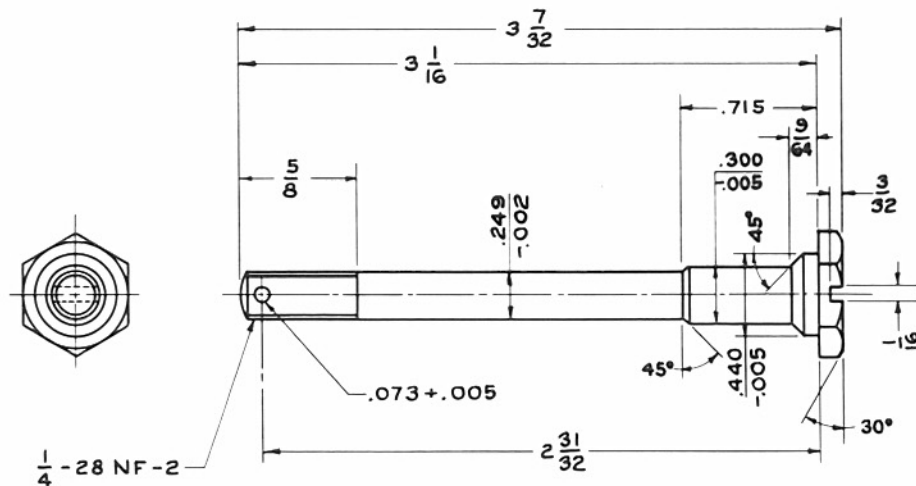
APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:-

*Walter C. ...*  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

B6008823

HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS B

**BOLT, COVER**  
STEEL FS 4140  
FINISH 125

6008824

PHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	C40-45
SCL.	

SEPT. 23, 1932

## REVISIONS

125-10-48

## DRG. PERTAINS TO

B6008757

.30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL: .005  
FRACTIONAL:  $1/64$   
ANGULAR:  $5^\circ$

DRAFTSMAN	TRACER	L'D'S DRAFTSMAN
T.J.C.	O.K.	
CHECKER	C.D.	CHIEF DRAFTSMAN
M.E.		

SUBMITTED:

A.H. Poe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

WAS B 8824

SCALE  $\frac{2}{1}$ 

B 6008824

B6008824

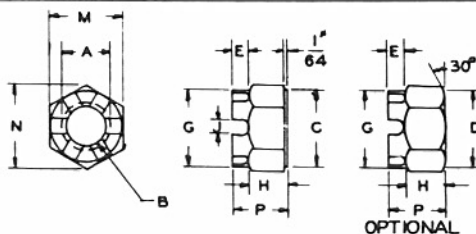
# NUT, CASTLE, NF, SEMI-FINISHED, LIGHT

## BBFXI

ORDNANCE DEPT. STANDARDS (COMMERCIAL)

W-CH 7-14-31  
APPROVED DATE

NOTE:  
ROUND OR SQUARE  
BOTTOM IN SLOTS  
OPTIONAL



DIAMETER, NOMINAL A MAJOR THD. DIAM.		MIN.	#10 .1900	1/4 .2500	5/16 .3125	3/8 .3750	7/16 .4375	1/2 .5000		
B THREADS PER INCH			32	28	24	24	20	20		
M WIDTH ACROSS FLATS	{	NOM.	3/8	7/16	1/2	9/16	5/8	3/4		
		MAX.	.3750	.4375	.5000	.5625	.6250	.7500		
N ACROSS CORNERS	{	MIN.	.365	.428	.489	.551	.612	.736		
		MIN.	.416	.488	.557	.628	.698	.840		
P THICKNESS	{	NOM.	1/4	9/32	21/64	13/32	29/64	9/16		
		MAX.	.266	.288	.336	.415	.463	.573		
	{	MIN.	.234	.274	.320	.396	.444	.552		
		NOM.	.110	3/16	15/64	9/32	19/64	13/32		
J WIDTH OF SLOT			5/64	5/64	3/32	1/8	1/8	5/32		
E DEPTH OF SLOT			3/32	3/32	3/32	1/8	5/32	5/32		
G DIAMETER OF CYLINDRICAL PART	{	MAX.	.231	.4375	.5000	.5625	.6250	.7500		
		MIN.	.211	.371	.425	.478	.531	.637		
MATERIAL AND FINISH			ORDNANCE PART NUMBER, NF-2							
<u>STEEL, COMMERCIAL</u> PLAIN FINISH CADMIUM OF ZINC PLATED PHOSPHATE COATED			103043 125013 125016	103044 125020 125024	103045 125027 131807	103046 125035 131802	103047 125043 131803			
<u>STEEL, ALLOY</u> PLAIN FINISH CADMIUM OR ZINC PLATED PHOSPHATE COATED			218595 432697 571221	218596 432709 571222	218597 432711 571223	218598 432744 571224	218599 571225			
MATERIAL AND FINISH			ORDNANCE PART NUMBER, NF-3							
<u>STEEL, COMMERCIAL</u> PLAIN FINISH CADMIUM OR ZINC PLATED PHOSPHATE COATED			503204	122498	122515	122531				

### MATERIAL:

STEEL, COMMERCIAL, MIN. ROCKWELL HARDNESS B-78.  
STEEL, ALLOY - MIN. YIELD STRENGTH 130,000 P.S.I.

EXAMPLE FOR ORDERING: NUT, CASTLE, S-FIN., S., LIGHT, 1/2"-20NF-2, DRG. BBFXI, PART NO. 103047, PLAIN.

NOTE: ALLOY STEEL NUTS SHALL BE STAMPED WITH THE LETTER H ON ONE SIDE OF THE HEXAGON.

NOTE: DIAMETER OF WASHER FACE C = M MAX. -5%. DIAMETER OF BOTTOM CIRCLE D = M MAX. -15%.

REFERENCE: A.S.A. B18.2-1941.

DIMENSIONS IN INCHES.

SUPERSEDES BBFXI WITH CHANGE 10-18-45

REVISION ⑦ 10-18-45 ⑧ 12-10-46



REVISIONS				ORIGINAL DATE OF DRAWING SEP 5, 1928		ORDNANCE ENGINEERING STANDARDS (COMMERCIAL)		ORDNANCE DEPT DEPT OF THE ARMY	
SYM	DESCRIPTION	DATE	APPD	DRAFTSMAN	CHECKER	PIN, COTTER. SPLIT		ENGINEERING & INSPECTION SECTION - ORDIP PREPARED BY ROCK ISLAND ARSENAL	
17		5-23-49	HCR	TYPIST BCL	CHECKER OMK				
18		10-14-49		ENGINEER H. C. Rogers	ENGINEER				
				SUBMITTED O'Connell	APPROVED G. S. Stamp				
				MATERIAL		SCALE		DIMENSIONS IN INCHES	
				COMMERCIAL					
				AS SPECIFIED					
								BFAXI	



HEAT TREATMENT AND FINAL FINISH

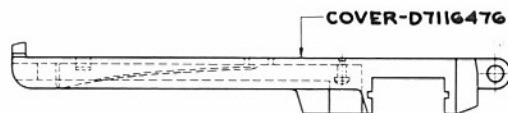
FINISH TYPE II, CLASS B

PHYSICAL PROPERTIES		JUNE 1, 1931	
		REVISIONS	
Y. P.		15	5-10-46
T. S.		16	6-21-49
EL. 2			
RED			
BR.			
ROCK.			
SCL.			
		DRG. PERTAINS TO	

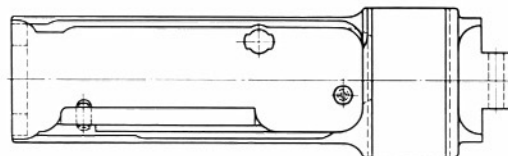
DRG. PERTAINS TO

C5564096

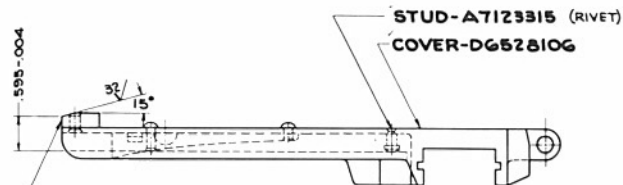
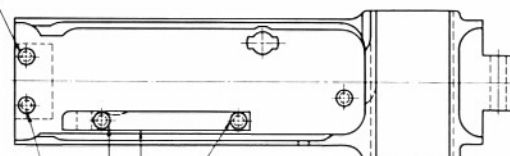
30 8 MG  
M19A4 (FXD)  
M19A5 (FLX)  
M19A5 (FXD)  
M19A9



COVER-D7116476

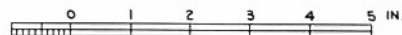


ALTERNATIVE A

STUD-A7123315 (RIVET)  
COVER-D6528106PLATE-A 5020505  
RIVET-A 5020513RIVET AND  
FILE FLUSHRIVET-A 7133165 (RIVET AND FILE FLUSH)  
CAM-B6017494  
RIVET-A 7133164 (RIVET AND FILE FLUSH)

COVER, ASSEMBLY

C5509801



WAS C5801

C5509801

INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± 0° 30'

DRAWN	TRACED	100% CHECKED
W.B.H.	<i>[Signature]</i>	<i>[Signature]</i>
CHECKED		CHIEF DRAFTSMAN
<i>[Signature]</i>		

SUBMITTED:

*A.H. Roe*APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE.*Walter Anderson*

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

C5509801

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

A5020503

APRIL 4, 1927

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

C43-49

REVISIONS

14 5-10-48

DRG. PERTAINS TO

51-114-5

.30 BMG  
M19A5(FXD)

51-125-5

.30 BMG  
M19A6

51-10-45

.30 BMG  
M17A1(WC)

51-83-5

.30 BMG  
M19A4(FXD)

51-84-5

.30 BMG  
M19A4(FLEX)INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL ± —

FRACTIONAL : 1/64

ANGULAR : 5°

DRAFTSMAN

M.E.B.

TRACER

A.V.C.

L'D'G DRAFTSMAN

CHECKER

L.S.C.

CHIEF DRAFTSMAN

SUBMITTED:

A.W. Roe

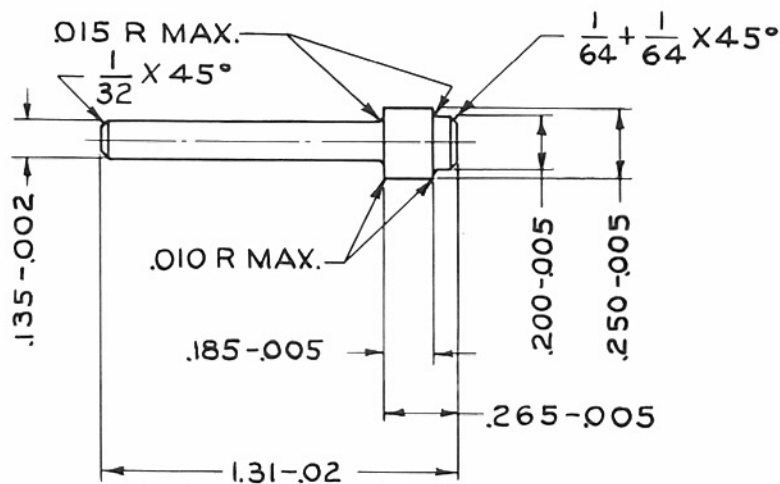
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



PIN, TRIGGER

STEEL FS4140

FINISH 125/

5020503

SCALE 2/1

WAS A20503

A 5020503

A5020513

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

APRIL 4, 1927

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

11 5-10-48

DRG. PERTAINS TO

ORDNANCE DIVISIONAL  
STANDARDINSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ 

FRACTIONAL —

ANGULAR  $\pm 5^\circ$ DRAFTSMAN  
W.C.O.TRACER  
E.B.

L'D'G DRAFTSMAN

CHECKER  
L.S. *W.C.O.*

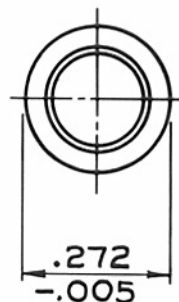
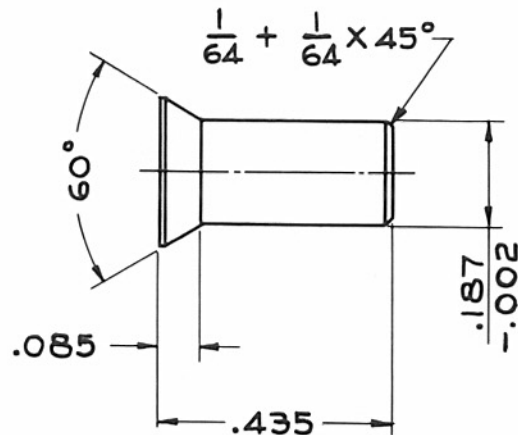
CHIEF DRAFTSMAN

SUBMITTED:

*A.H. Roe*APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



**RIVET**  
STEEL FS 1035  
FINISH 125/

(5020513)

WAS A20513

SCALE  $\frac{4}{1}$ 

A 5020513

A7123315

MAY 25, 1945

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

Y. P.

RED.

SCL.

T. S.

BR.

E. L. 2

ROCK

## REVISIONS

1 5-10-48

## DRG. PERTAINS TO

C5509814

30 B.M.G.  
M17A1 (WC)

C5509801

30 B.M.G.  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 5^\circ$

DRAFTSMAN

W.O.F.

TRACER

A.V.C.

L'D'G DRAFTSMAN

CHECKER

H.W.J.

CHIEF DRAFTSMAN

## SUBMITTED:

A.H. Roe

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

Y. P.

RED.

SCL.

T. S.

BR.

E. L. 2

ROCK

## REVISIONS

1 5-10-48

## DRG. PERTAINS TO

C5509814

30 B.M.G.  
M17A1 (WC)

C5509801

30 B.M.G.  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 5^\circ$

DRAFTSMAN

W.O.F.

TRACER

A.V.C.

L'D'G DRAFTSMAN

CHECKER

H.W.J.

CHIEF DRAFTSMAN

## SUBMITTED:

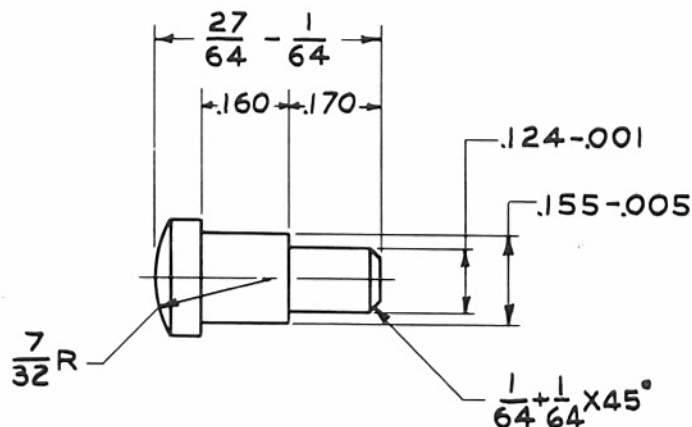
A.H. Roe

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



**STUD, COVER EXTRACTOR SPRING**  
**STEEL FS1115**

FINISH 125/  
✓

7123315

SUPERSEDES A7123315 WQ/C 5-10-48

SCALE  $\frac{4}{1}$ 

A 7123315



## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

A7133164

MAY 10, 1948

## REVISIONS

Y. P.

RED.

SCL.

T. S.

BR.

EL 2

ROCK

## DRG. PERTAINS TO

C5509801

30 BMG M19A4  
(FXD) & (FLEX.)  
M19A5 (FXD)  
M19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm \frac{1}{64}$ ANGULAR  $\pm 5'$ 

DRAFTSMAN

A.P.R.

TRACER

E.R.G.

L'D'G DRAFTSMAN

CHECKER

H.W.J.  
Eure

CHIEF DRAFTSMAN

## SUBMITTED:

A.H. Roe

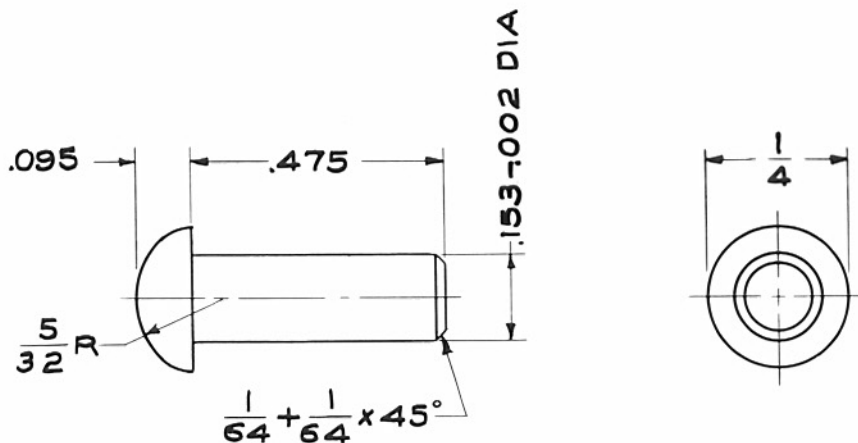
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**RIVET COVER EXTRACTOR CAM, LONG**

STEEL FS1035

FINISH  $\frac{125}{\sqrt{}}$ 

7133164

SUPERSEDES A20511A WO/C 5-10-48

SCALE  $\frac{4}{1}$ 

A 7133164

MADE AT ROCK ISLAND ARSENAL

A7133165

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

MAY 10, 1948

Y. P.

RED.

SCL.

T. S.

BR.

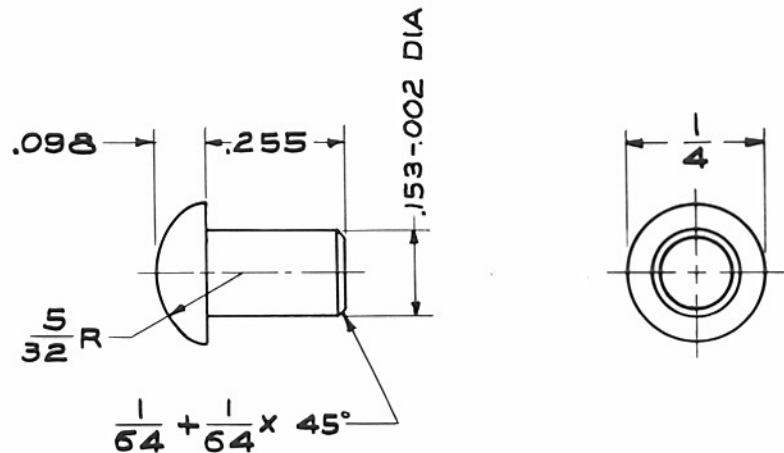
EL. 2

ROCK

## REVISIONS

## DRG. PERTAINS TO

C5509801

30BMG M19A4  
(FXD) & (FLEX.)  
M19A5 (FXD)  
M19A6**RIVET, COVER EXTRACTOR CAM, SHORT**

STEEL FS 1035

FINISH  $\frac{125}{\sqrt{\quad}}$ 

(7133165)

~~DO~~INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm \frac{1}{64}$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

A.P.R.

TRACER

E.R.G.

L'D'G DRAFTSMAN

CHECKER

M.W.D.

CHIEF DRAFTSMAN

SUBMITTED:

*A.H. Roe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

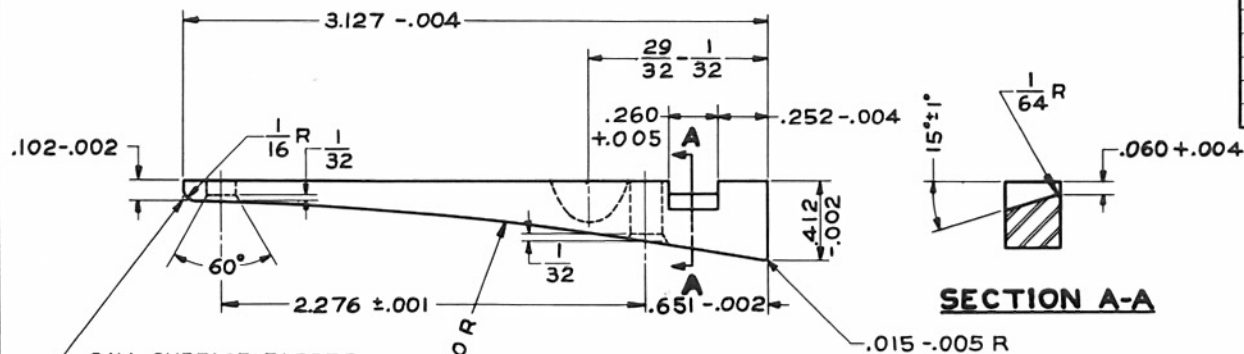
SUPERSEDES A20512A W/O/C 5-10-48

SCALE  $\frac{4}{1}$  A 7133165

MADE AT ROCK ISLAND ARSENAL

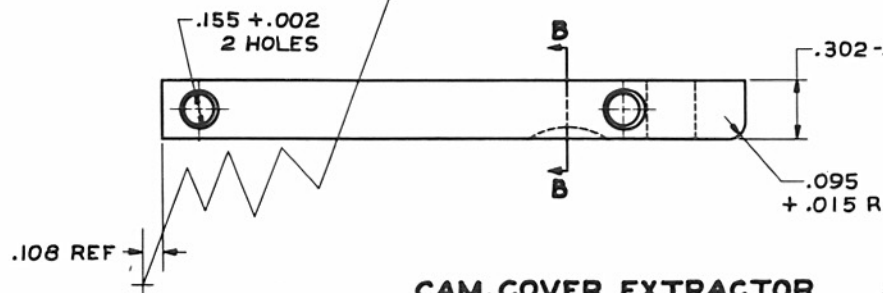
## HEAT TREATMENT AND FINAL FINISH

CARBON CASE .010 TO .015 DEEP.  
ANNEAL ONE HALF INCH OF SMALL END.



SECTION A-A

CAM SURFACE PASSES  
THROUGH THIS INTERSE-  
CTION BEFORE THE CORNER  
RADIUS IS APPLIED



SECTION B-B

**CAM, COVER EXTRACTOR**  
STEEL FS4615  
FINISH 125/

6017494

WAS B17494

SCALE  $\frac{2}{1}$ 

B 6017494

PHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	A78-83
SCL.	

APRIL 4, 1927

## REVISIONS

16	5-10-48	

## DRG. PERTAINS TO

C5509814	.30 BMG M17A1(WC)
C5509801	.30 BMG M19A4(FXD) M19A4(FLEX) M19A5(FXD) M19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± 1/64  
ANGULAR: 5°

DRAWN R.A.G.	TRACER L.R.E.	L.S.'S DRAFTSMAN
CHECKED J.H.	C.D.	CHIEF DRAFTSMAN

## SUBMITTED:

F.H. ROE

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter A. Sherman  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

B6017494

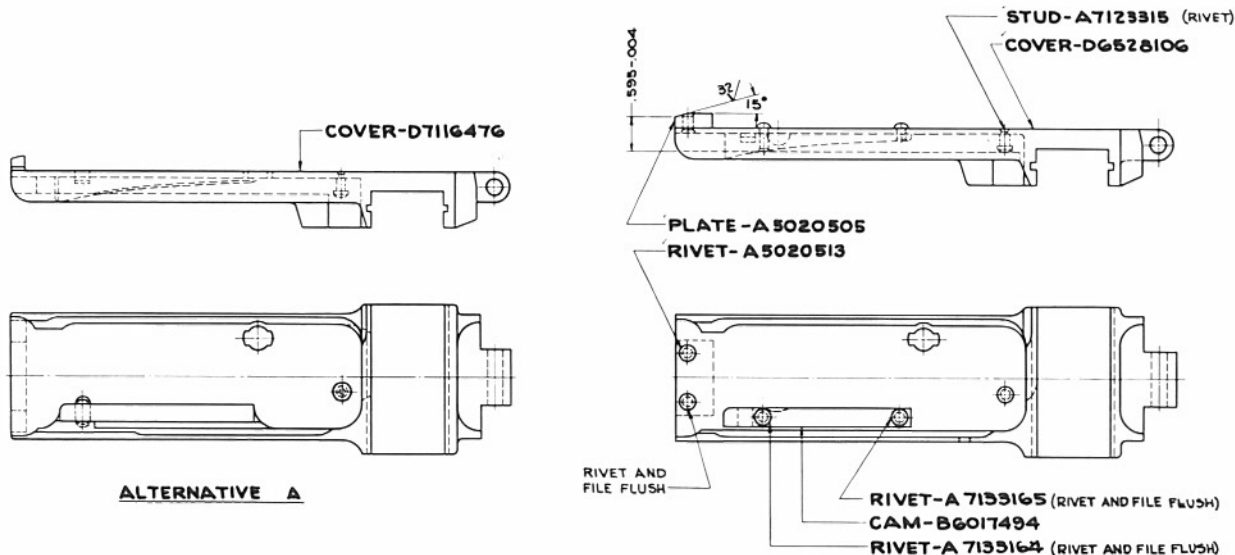
HEAT TREATMENT AND FINAL FINISH

FINISH TYPE II, CLASS B

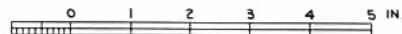
PHYSICAL PROPERTIES		JUNE 1, 1931	
		REVISIONS	
Y. P.		15	5-10-40
T. S.		16	6-21-49
EL. #			
RED			
BR.			
ROCK.			
SCL.			

DRG. PERTAINS TO

C5509801  
 M19AA (FXD)  
 M19AA (FLX)  
 M19AS (FXD)  
 M19AS

ALTERNATIVE ACOVER, ASSEMBLY

5509801



WAS C9801

C5509801

INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL : —

FRACTIONAL : —

ANGULAR : 0° 30'

W.B.H. *W.B.H.*CHECKED *W.B.H.* CHIEF DRAFTSMAN

SUBMITTED:

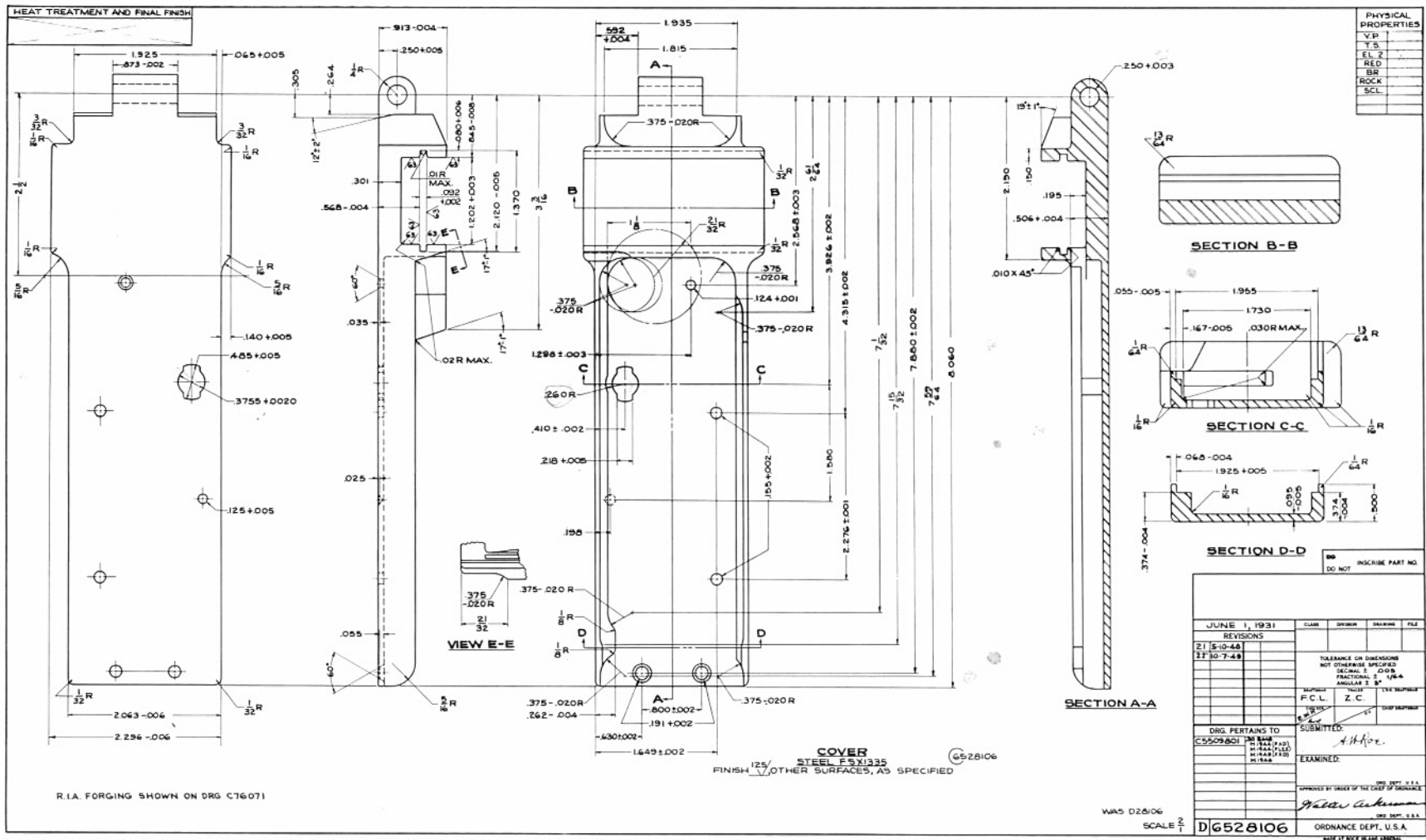
*A.H. Roe*APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE*Walter C. Anderson*

ORD. DEPT. U. S. A.

MADE AT ROCK ISLAND ARSENAL

C5509801





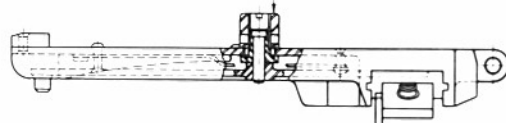
PHYSICAL PROPERTIES		SEPTEMBER 30, 1936	
		REVISIONS	
Y. P.		12	5-10-48
T. S.		13	6-21-49
EL. 2			
RED			
BR.			
ROCK			
SCL.			

DRG. PERTAINS TO

51-83-1	30 B MG
51-84-1	M19A4 (FXD)
51-114-1	30 B MG
51-125-1	M19A5 (FXD)
	30 B MG
	M19A6

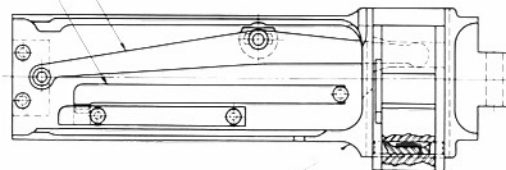
C5564096

★PIVOT, ASSEMBLY-BG110529



LEVER-BG017503

SPRING-BG017513



★ COVER, ASSEMBLY-C 5509801

SPRING-BG147224

★SLIDE, ASSEMBLY-BG131262

★PIN, ASSEMBLY-BG131255

PAWL-C5508461



★ FINDING DIAGRAM

INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL : —

FRACTIONAL : —

ANGULAR : —

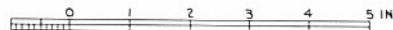
CHECKED BY: *W. H. R.* DATE: *10/10/36*SUBMITTED BY: *W. H. R.* DATE: *10/10/36*APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE*W. H. R.*

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

COVER, BELT FEED, ASSEMBLY

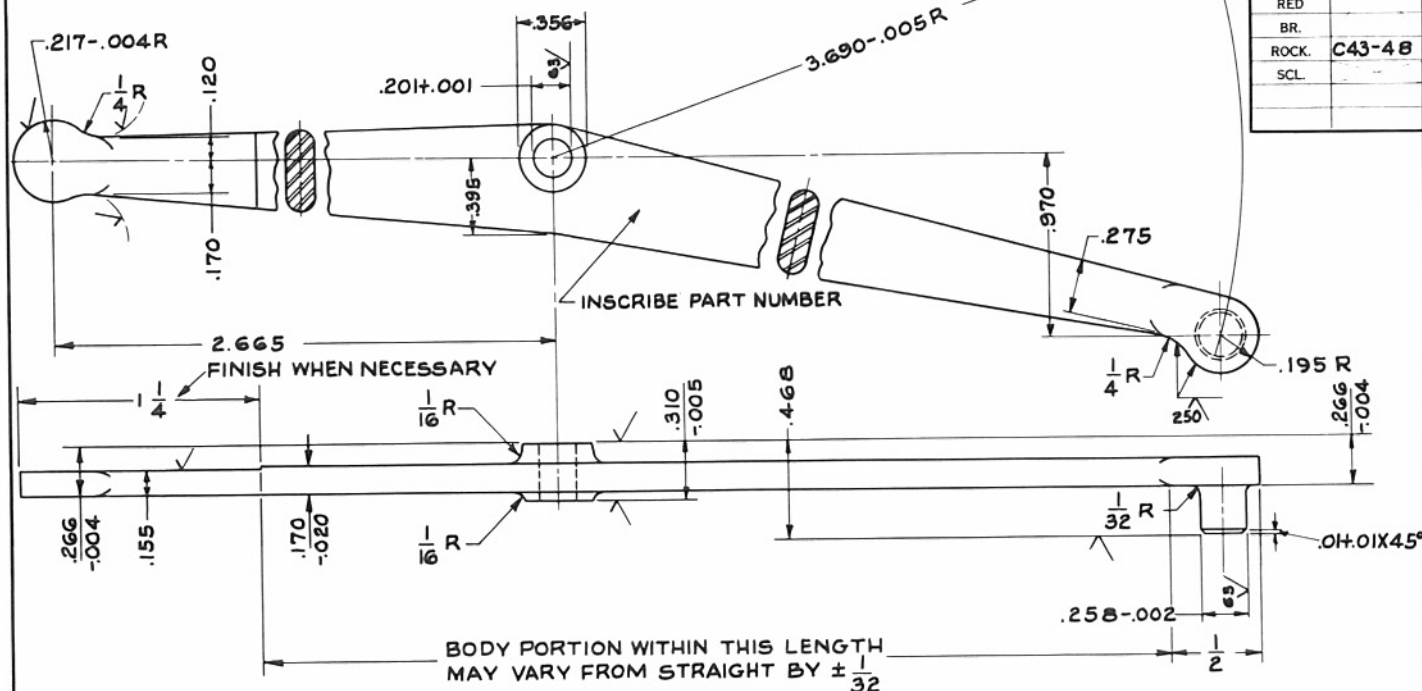
5564096



WAS C64096

C5564096

## HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS B**LEVER, FEED, BELT** (6017503)  
**STEEL F54140**FINISH  $\sqrt{}$  TO BE  $\sqrt{125}$ , OTHER SURFACES,  
AS SPECIFIED

R.I.A. FORGING SHOWN ON DRG A186415

PHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	C43-48
SCL	

APRIL 4, 1927

## REVISIONS

205-10-48

## DRG. PERTAINS TO

C5509177 .30 BMG M17A1(WC)  
C5564096 .30 BMG M19A4(FXD)  
M19A4(FLEX)  
M19A5(FXD)  
M19AG

DO INSCRIBE PART NO.

60-17503

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL:  $1/64$   
ANGULAR:  $5^\circ$

DRAFTERMAN	TRACER	L'D'G DRAFTERMAN
F.H.M.	M.C.	
CHECKER		CHIEF DRAFTERMAN
S.S.		

## SUBMITTED:

A.H. Roe

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

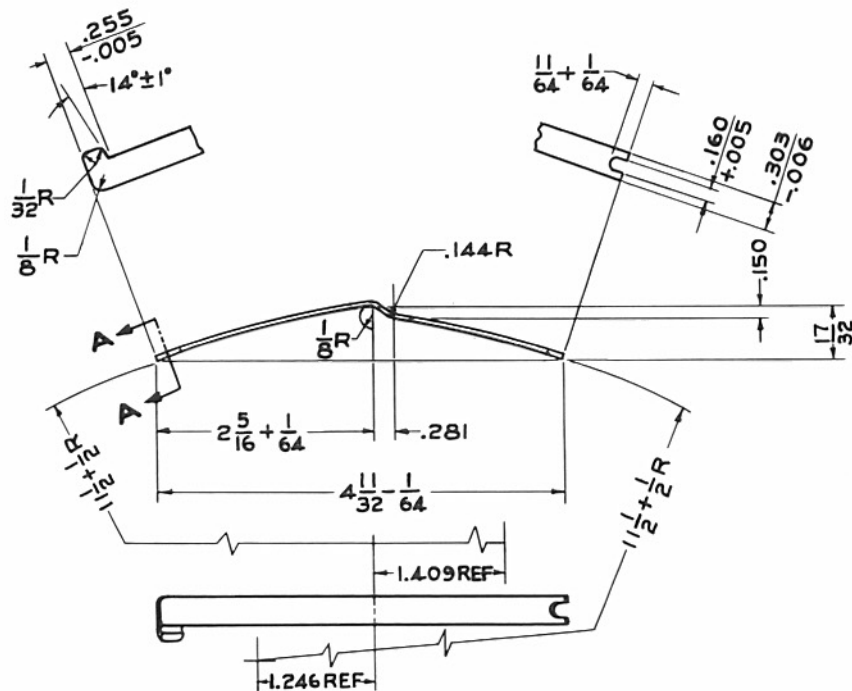
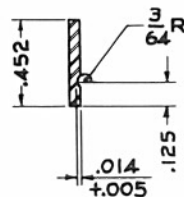
SCALE  $\frac{2}{1}$ 

B 6017503

WAS B17503

B6017503

HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS BDEVELOPED LENGTH =  $4\frac{1}{2}$  APPROX

SECTION A-A

SCALE  $\frac{2}{1}$ 

SPRING COVER EXTRACTOR

SPRING STEEL WDI095

NO.18 (.0478) U.S. GAGE THICK

FINISH  $\frac{125}{V}$ 

6017513

WAS B17513

SCALE  $\frac{1}{T}$ 

B 6017513

PHYSICAL

PROPERTIES

Y. P.

T. S.

EL. 2

RED

BR.

ROCK.

SCL

A73-76

APRIL 4, 1927.

REVISIONS

15 5-10-48

DRG. PERTAINS TO

C5509177

C5564096

30 BMG  
M17A1 (WC)  
.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm$

DESIGNER	TRACER	L.O.'S DRAFTER
R.W.D.	E.B.	
CHIEF DRAFTER		

SUBMITTED:

A.H. Roe

APPROVED BY ORDER OF THE CHIEF

OF ORDNANCE:

Walter A. ...

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

B6017513

## HEAT TREATMENT AND FINAL FINISH

DRAW AT 450°F.  
TYPE I FINISH, CLASS OSC  
BAKE ONE HOUR AT 300-350°F.



DIAMETER OF WIRE \_\_\_\_\_ .032  
TOTAL NUMBER OF COILS \_\_\_\_\_ 6.  
OUTSIDE DIAMETER, FREE \_\_\_\_\_ .340±.005  
MAX. OUTSIDE DIA AT MIN OPERATING HEIGHT \_\_\_\_\_ .356  
FREE LENGTH \_\_\_\_\_ .78±.03  
TYPE OF ENDS \_\_\_\_\_ AS SHOWN  
WOUND \_\_\_\_\_ R. H.  
MEAN ASSEMBLED HEIGHT \_\_\_\_\_ .4  
MIN LOAD AT MEAN ASSEMBLED HEIGHT \_\_\_\_\_ 3.7 LB  
MINIMUM OPERATING HEIGHT \_\_\_\_\_ .238  
MIN LOAD AT MIN OPERATING HEIGHT \_\_\_\_\_ 6.1 LB±1 LB  
LB PER INCH OF SPRING DEFLECTION \_\_\_\_\_ 9.73  
SPRING FUNCTIONS IN HOLE \_\_\_\_\_ .357  
SPRING FUNCTIONS OVER ROD \_\_\_\_\_ .156  
CALCULATED MIN SOLID HEIGHT \_\_\_\_\_ .192

CAUTION: DO NOT COMPRESS SOLID NOTE:

.5% OF SPRINGS WILL BE FATIGUE TESTED  
BETWEEN ASSEMBLED HEIGHT AND MINIMUM  
OPERATING HEIGHT FOR 25,000 CYCLES.  
THE LOAD AT ASSEMBLED HEIGHT, AFTER  
TESTING, SHOULD NOT BE LESS THAN 2.5 LB

**SPRING, BELT FEED PAWL**  
**SPRING STEEL WIRE WD1085 SPECIAL-CLASS A**

6147224

WAS B147224

SCALE  $\frac{2}{1}$ 

B 6147224

PHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED.	
BR.	
ROCK	
SCL.	

FEBRUARY 1, 1938

## REVISIONS

12	5-10-48		

## DRG. PERTAINS TO

C5509177 .30 BMG  
M19A1 (WC)  
C5564096 .30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN W.L.M.	TRACER M.C.	L'D'G DRAFTSMAN
CHECKER W.L.M.	CHECKER M.C.	CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter A. ...

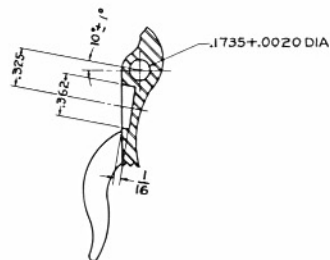
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

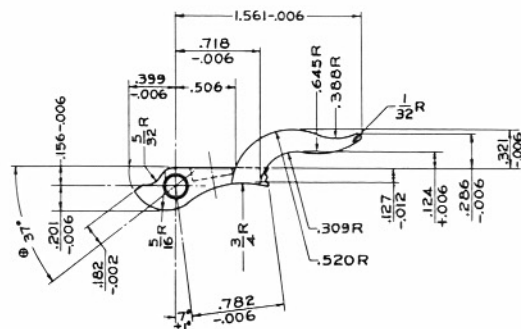
B6147224



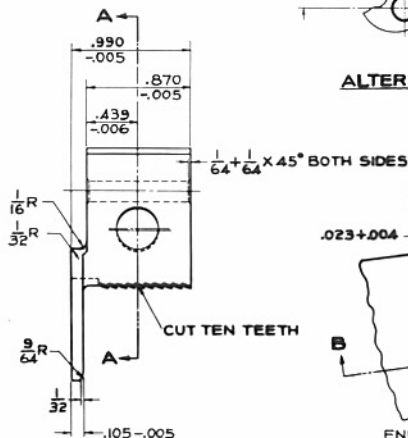
HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS B

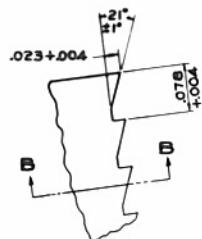
SECTION A-A



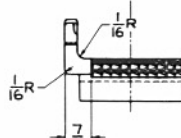
⊙ PERMISSIBLE ANGLE TOLERANCE NOT SPECIFIED, MUST BE WITHIN LIMITS PRESCRIBED BY LOCATING DIMENSIONS.



ALTERNATIVE DESIGN



ENLARGED VIEW OF SERRATIONS

SCALE  $\frac{10}{1}$ 

SECTION B-B

SCALE  $\frac{10}{1}$ PAWL, FEED, BELT  
STEEL FS 4140  
FINISH 125

5508461

PHYSICAL PROPERTIES		JUNE 1, 1931 REVISIONS	
Y. P.		18	5-10-40
T. S.			
EL. 2			
RED			
BR.			
ROCK.	C52-55		
SCL.			

DRG. PERTAINS TO

C5509177 30 BMS

C5561096 M14A (WC)

30 BMS M14A (FDR)

30 BMS M14A (FLEX)

30 BMS M14A (FDR)

30 BMS M14A

WAS C8461

DO NOT INSCRIBE PART NO.

SCALE  $\frac{10}{1}$ 

5508461

TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED

DECIMAL  $\pm .005$ FRACTIONAL  $\pm \frac{1}{64}$ ANGULAR  $\pm 1^\circ$ 

DRAFTSMAN P.J.R. E.B.

CHECKED BY E.B.

SUBMITTED.

APPROVED BY ORDER OF THE CHIEF OF ORDNANCE.

ORD. DEPT. U. S. A.

ORD. DEPT. U. S. A.

ORD. DEPT. U. S. A.

ORD. DEPT. U. S. A.

ORD. DEPT. U. S. A.

C5508461

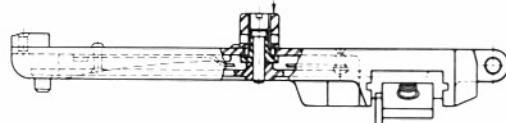
PHYSICAL PROPERTIES		SEPTEMBER 30, 1936	
		REVISIONS	
Y. P.		12	5-10-48
T. S.		13	6-21-49
EL. 2			
RED			
BR.			
ROCK			
SCL			

DRG. PERTAINS TO

51-83-1	30 B MG M19A4 (FXD)
51-84-1	30 B MG M19A4 (FLEX)
51-114-1	30 B MG M19A5 (FXD)
51-125-1	30 B MG M19A6

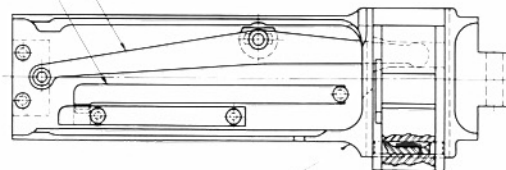
C5564096

★PIVOT, ASSEMBLY-BG110529



LEVER-BG017503

SPRING-BG017513



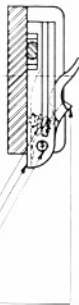
★ COVER, ASSEMBLY-C 5509801

SPRING-BG147224

★SLIDE, ASSEMBLY-BG131262

★PIN, ASSEMBLY-BG131255

PAWL-C5508461



★ FINDING DIAGRAM

INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL : —

FRACTIONAL : —

ANGULAR : —

DESIGNER	C.F.D.	INSP.	J.E. ROBERTSON
CHECKER	J.E. ROBERTSON	INSP.	J.E. ROBERTSON

SUBMITTED:

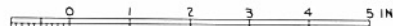
APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

COVER, BELT FEED, ASSEMBLY

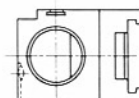
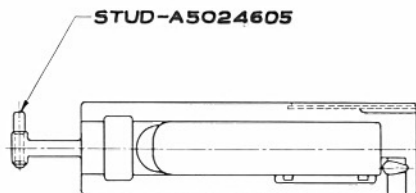
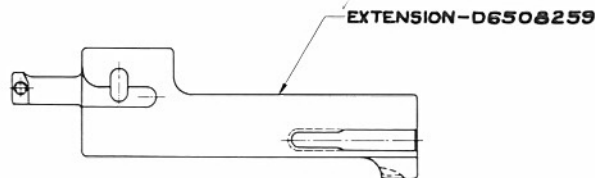
5564096



WAS C64096

C5564096

HEAT TREATMENT AND FINAL FINISH  
TYPE II FINISH, CLASS B



EXTENSION, BARREL, ASSEMBLY C5564139

PHYSICAL PROPERTIES		FEB. 1, 1938	
		REVISIONS	
Y. P.		8	5-10-48
T. S.			
EL. 2			
RED			
BR.			
ROCK.			
SCL.			
		DRG. PERTAINS TO	
		51-10-1	30 BMG MITA (WC)
		51-83-1	30 BMG M19A4 (FXD)
		51-84-1	30 BMG M19A4 (FLEX)
		51-114-1	30 BMG M19A3 (FXD)
		51-125-1	30 BMG M19A6

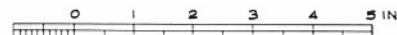
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DECIMAL: —  
FRACTIONAL: —  
ANGULAR: —

DESIGNED BY: *M. J. E. R. G.* CHECKED BY: *[Signature]* DRAFTSMAN: *[Signature]*

SUBMITTED: *[Signature]*

APPROVED BY ORDER OF THE CHIEF OF ORDNANCE: *[Signature]*

ORDNANCE DEPT., U. S. A.



WAS C64139

DO NOT INSCRIBE PART NO.

C5564139

MADE AT ROCK ISLAND ARSENAL

C5564139

A 5024605

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

JUNE 1, 1931

HEAT TREAT

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

C 30-35

REVISIONS

11 5-10-48

DRG. PERTAINS TO

C5564139

30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

F.C.L.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

L.S.E.

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

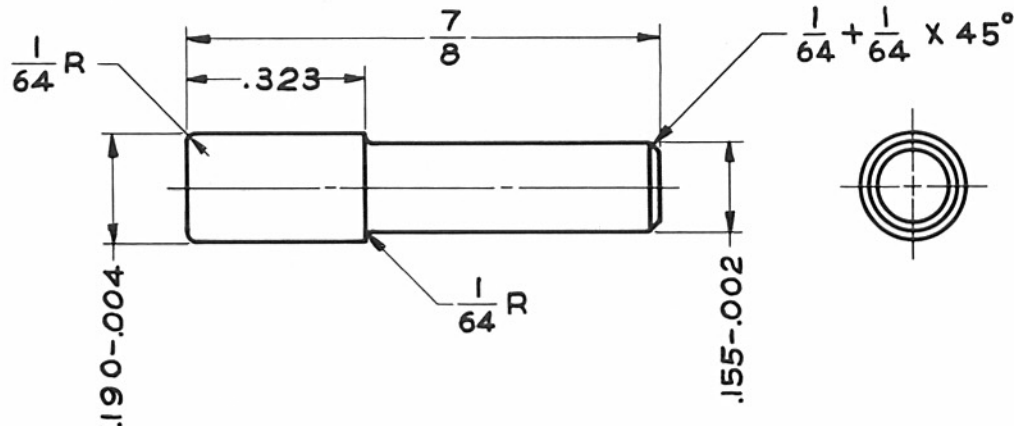
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**STUD. BARREL PLUNGER**

STEEL FS 1095

FINISH 125/

5024605

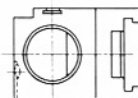
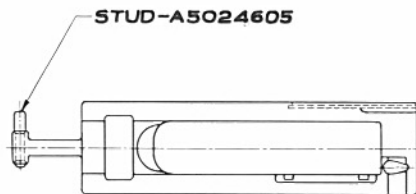
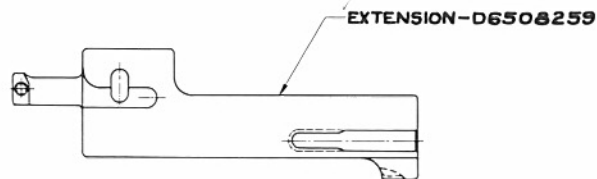
WAS A24605

SCALE  $\frac{4}{1}$ 

A

5024605

HEAT TREATMENT AND FINAL FINISH  
TYPE II FINISH, CLASS B



EXTENSION, BARREL ASSEMBLY (S564139

PHYSICAL PROPERTIES		FEB. 1, 1938	
		REVISIONS	
Y. P.		8	5-10-48
T. S.			
EL. 2			
RED			
BR.			
ROCK.			
SCL.			
DRG. PERTAINS TO			
51-10-1		30 BMG	M17A1 (WG)
51-83-1		30 BMG	M19A4 (FXD)
51-84-1		30 BMG	M19A4 (FLX)
51-114-1		30 BMG	M19A3 (FXD)
51-125-1		30 BMG	M19A9

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL : —  
FRACTIONAL : —  
ANGULAR : —

DESIGNED BY *M. J. E. R. G.* CHECKED BY *M. J. E. R. G.*  
DRAWN BY *M. J. E. R. G.* FIRST DRAFTSMAN

SUBMITTED:  
*A. H. R. O. E.*

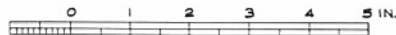
APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:  
*Matthew C. Anderson*  
ORD. DEPT. U. S. A.

ORDNANCE DEPT., U. S. A.  
MADE AT ROCK ISLAND ARSENAL

WAS C64139

DO NOT INSCRIBE PART NO.

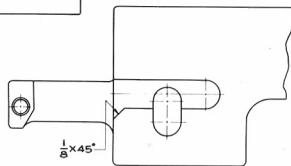
(5564139



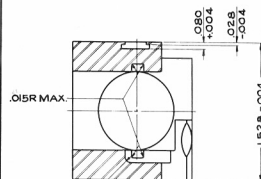
C5564139



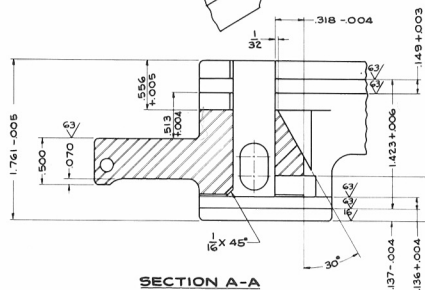
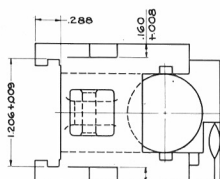
## HEAT TREAT



### ALTERNATIVE METHOD OF MANUFACTURE

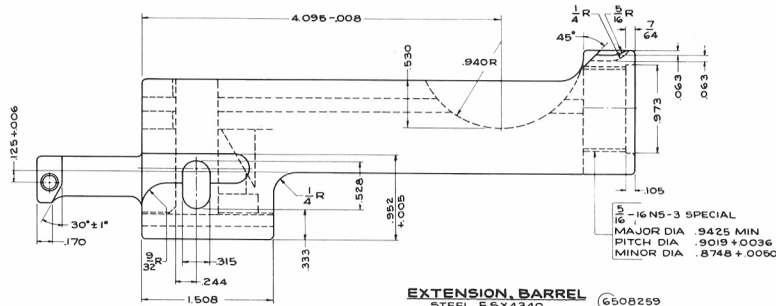
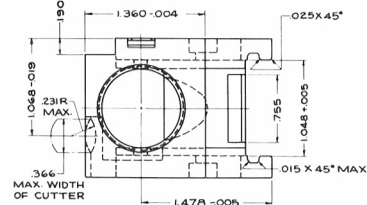
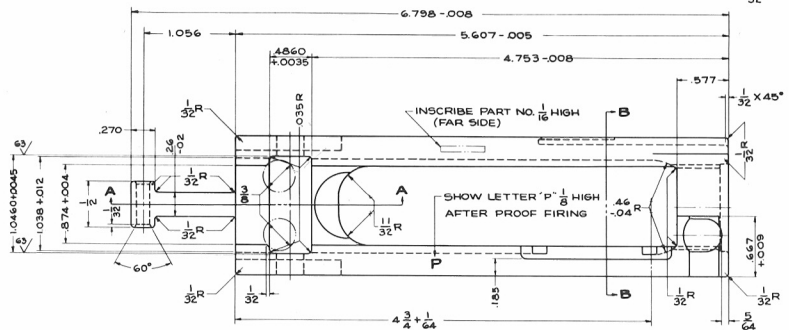
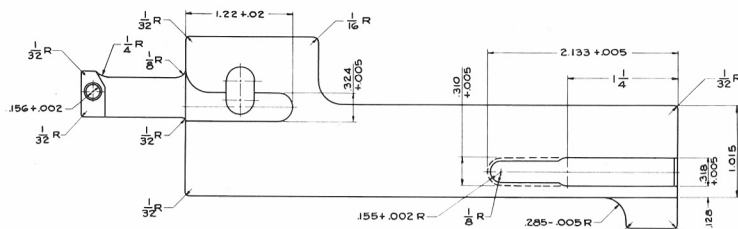


**SECTION B-B**



**SECTION A-A**

R.I.A. FORGING SHOWN ON DRG C76070



EXTENSION, BARREL 6508350

FINISH  $\frac{125}{\sqrt{}}$  STEEL F SX4340 OTHER SURFACES, AS SPECIFIED





WAS D8259

SCALE 2

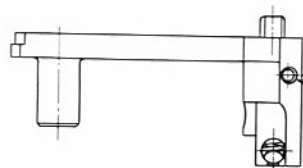
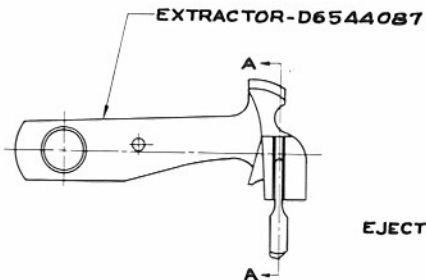
PHYSICAL PROPERTIES	
Y.P.	
T.S.	
EL. 2	
RED	
BR	
ROCK	C-45-52
SCL	

D6508259

DO	INSCRIBE PART NO.
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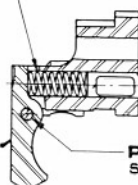
APRIL 4, 1927		CLASS	DIVISION	DRAWING	FILE
REVISIONS					
33 15-10-46					
<p>TOLERANCE ON DIMENSIONS          NOT OTHERWISE SPECIFIED          DECIMAL S. DIMS. <math>\pm .004</math>          FRACTIONAL          ANGULAR <math>\pm 5''</math></p>					
MEASURED M.E.B.		Z.C.		T.O. MEASURED	
CHECKED 				TESTED TESTED BY	
SUBMITTED					
					
EXAMINED:					
ORD. DEPT. U.S.A. APPROVED BY ORDER OF THE CHIEF OF ORDNANCE 					
ORD. DEPT. U.S.A. JORD. DEPT. U.S.A.					
D 6508259					
ORDNANCE DEPT. U.S.A.					

HEAT TREATMENT AND FINAL FINISH

PIN-A5020570  
STAKE BOTH ENDS

EXTRACTOR-D6544087

SPRING-B6147228



PLUNGER-B6261101

EJECTOR-B607497

PIN-A5020570  
STAKE BOTH ENDS

SECTION A-A

EXTRACTOR ASSEMBLY 5621076

PHYSICAL PROPERTIES		OCTOBER 30, 1942	
		REVISIONS	
Y. P.		3	5-10-48
T. S.			
EL. 2			
RED			
BR.			
ROCK.			
SCL.			

DRG. PERTAINS TO

51-10-1	30 B.M.G.
51-8-3-1	M 17A1 (WC)
51-8-4-1	30 B.M.G.
51-114-1	M 19AA (FXD)
51-125-1	30 B.M.G.
	M 19AA (FLEX)
	30 B.M.G.
	M 19A3 (FXD)
	30 B.M.G.
	M 19A6

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL:  $\pm$  .005  
FRACTIONAL:  $\pm$  .005  
ANGULAR:  $\pm$  .005

DESIGNED <i>ERG</i>	CHECKED <i>ERG</i>	TRACED <i>ERG</i>	COR. DRAFTSMAN
SUBMITTED <i>ERG</i>		COR. DRAFTSMAN	

SUBMITTED  
*ERG*APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE  
*W. H. R. O.*

ORD. DEPT. U. S. A.

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

WAS C121076

DO NOT INSCRIBE PART NO.

5621076



C5621076

A5020570

APRIL 4, 1927

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

C38-43

## REVISIONS

14 5-10-48

## DRG. PERTAINS TO

C5621076

30 BMS  
M 17A1(WC)  
M 19A4(FXD)  
M 19A4(FLEX)  
M 19A5(FXD)  
M 19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm$  —  
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm$  —

DRAFTSMAN

M.T.

TRACER

L.R.E.

L'D'S DRAFTSMAN

CHECKER

L.R.E.

CHIEF DRAFTSMAN

O.O.

SUBMITTED:

A.H. Roe

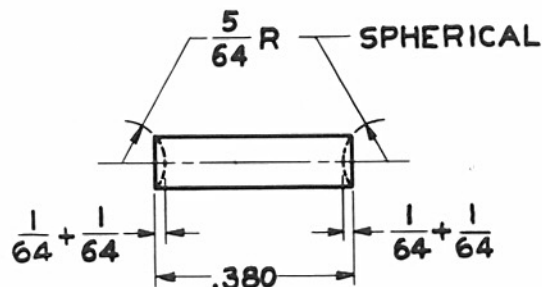
ORD. DEPT.. U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD: DEPT.. U. S. A.

ORDNANCE DEPT., U. S. A.

PIN  
STEEL FS 1095  
FINISH 125/

WAS A20570

SCALE  $\frac{4}{1}$ 

A 5020570

HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS BPHYSICAL  
PROPERTIESY. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

C 39-45

APRIL 4, 1927

REVISIONS

17 5-10-48

DRG. PERTAINS TO

C5621076

.30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

DO

INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR:  $5^\circ$ 

DRAFTSMAN	TRACER	L/C DRAFTSMAN
E.L.U.	Z.C.	
CHECKER		CHIEF DRAFTSMAN

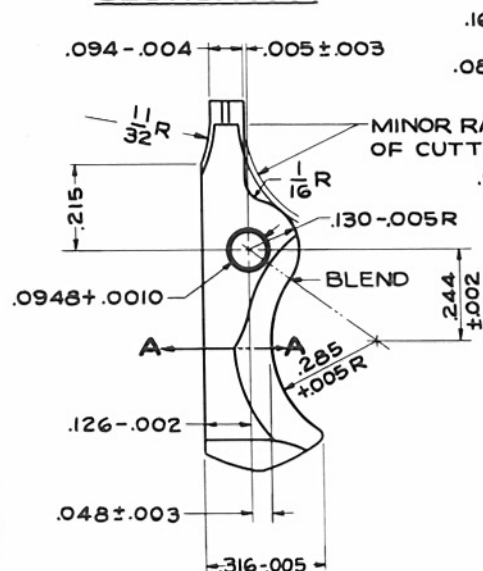
SUBMITTED:

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:


ORD. DEPT., U. S. A.

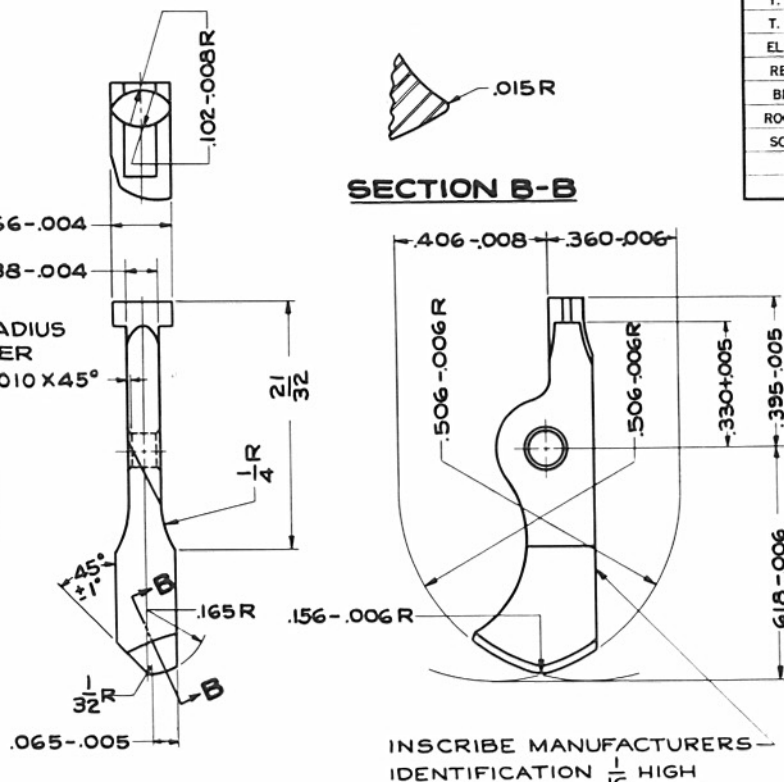
ORDNANCE DEPT., U. S. A.

## SECTION A-A

EJECTOR  
STEEL FS 4140  
FINISH 125

6017497

## SECTION B-B

INSCRIBE MANUFACTURERS  
IDENTIFICATION  $\frac{1}{16}$  HIGH

WAS B17497

SCALE  $\frac{4}{1}$ 

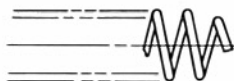
B

6017497

B6017497

## HEAT TREATMENT AND FINAL FINISH

DRAW AT 450°F.  
TYPE I FINISH, CLASS OSC  
BAKE ONE HOUR AT 300-350°F.



$.109 \pm .010$

DIAMETER OF WIRE  $.020$   
TOTAL NUMBER OF COILS  $9 \frac{1}{2}$   
OUTSIDE DIAMETER, FREE  $.187 \pm .004$   
MAX. OUTSIDE DIA AT MIN. OPERATING HEIGHT  $.195$   
FREE LENGTH  $.68 \pm .02$   
TYPE OF ENDS FORM AS SHOWN (BOTH ENDS)  
WOUND R.H.  
MEAN ASSEMBLED HEIGHT  $.362$   
MIN. LOAD AT MEAN ASSEMBLED HEIGHT  $1.58 \text{ LB}$   
MIN. OPERATING HEIGHT  $.321$   
MIN. LOAD AT MIN. OPERATING HEIGHT  $1.69 \text{ LB}$   
LB PER INCH OF SPRING DEFLECTION  $4.9$   
SPRING FUNCTIONS IN HOLE  $.200$   
CALCULATED MAX. SOLID HEIGHT  $.190$

CAUTION: DO NOT COMPRESS SOLID

## NOTE:

.5% OF SPRINGS WILL BE FATIGUE TESTED  
BETWEEN ASSEMBLED HEIGHT AND MINIMUM  
OPERATING HEIGHT FOR 25,000 CYCLES. THE  
LOAD AT ASSEMBLED HEIGHT, AFTER TESTING,  
SHOULD NOT BE LESS THAN 1.25 LB

**SPRING EXTRACTOR CAM PLUNGER** 6147228  
**SPRING STEEL WIRE WD1085 SPECIAL - CLASS A**

## PHYSICAL PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

FEBRUARY 1, 1938

## REVISIONS

12	5-10-48		

## DRG. PERTAINS TO

C5621076 .30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

DO INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm$  —  
FRACTIONAL  $\pm$  —  
ANGULAR  $\pm$  —

DRAFTSMAN W.L.M.	TRACER M.C.	L.D'S DRAFTSMAN
CHECKER W.L.M.	C.O.	CHIEF DRAFTSMAN

SUBMITTED:

*A.H. Poe*  
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:  
*Walter Dickman*  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

WAS 8147228

B 6147228

B6147228



HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS B

PHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	C44-52
SCL.	

OCTOBER 30, 1942

REVISIONS

45-10-48	

DRG. PERTAINS TO

C5621076 30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± .005  
FRACTIONAL ± 1/64  
ANGULAR ± —

DRAWN J.B.M.	TECHNICAL E.B.	CHECKED G.D.	CHIEF DRAFTSMAN
-----------------	-------------------	-----------------	-----------------

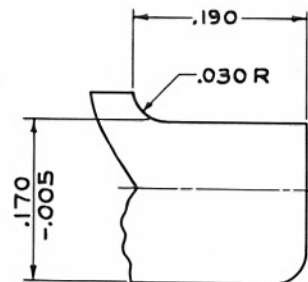
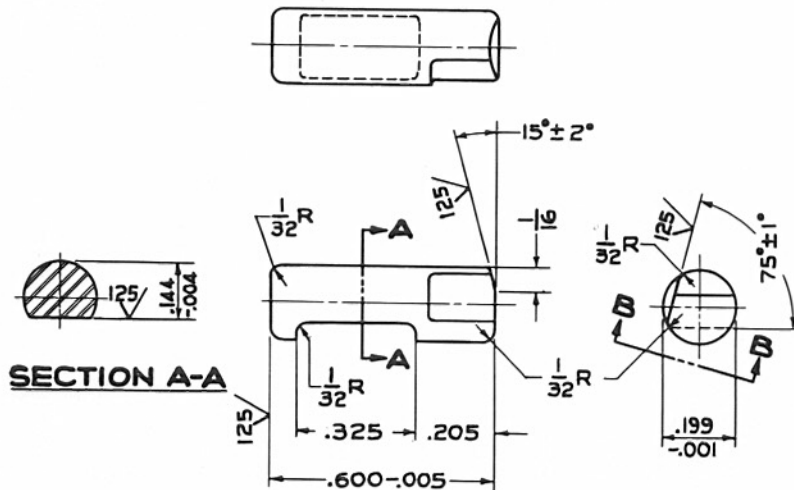
SUBMITTED:  
*A.H. Roe*

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:-  
*Walter C. Anderson*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

B6261101



VIEW B-B

SCALE 10/1

PLUNGER, EXTRACTOR CAM

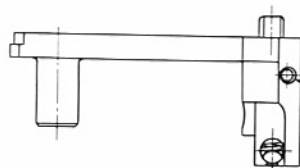
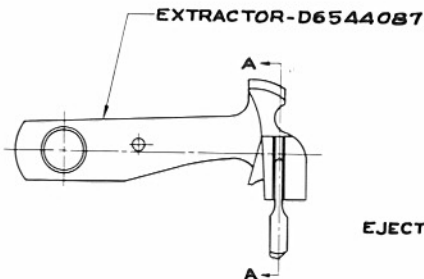
FINISH  $\sqrt{63}$  DRILL ROD  
OTHER SURFACES, AS SPECIFIED

6261101

WAS B261101

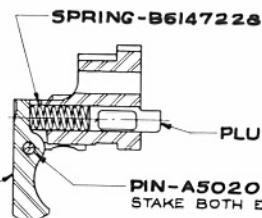
SCALE 4/1 B 6261101

HEAT TREATMENT AND FINAL FINISH

PIN-A5020570  
STAKE BOTH ENDS

EXTRACTOR-D6544087

EJECTOR-B607497



SPRING-B6147228

PLUNGER-B6261101

SECTION A-A

EXTRACTOR, ASSEMBLY 5621076

PHYSICAL PROPERTIES		OCTOBER 30, 1942 REVISIONS	
Y. P.		3	5-10-48
T. S.			
EL. 2			
RED			
BR.			
ROCK.			
SCL.			
DRG. PERTAINS TO			
51-10-1	30 BMG M17A1(WC)		
51-83-1	30 BMG M19A4(FXD)		
51-84-1	30 BMG M19A4(FLEX)		
51-114-1	30 BMG M19A5(FXD)		
51-125-1	30 BMG M19A6		

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL : —  
FRACTIONAL : —  
ANGULAR : —

DESIGNED	ERG	CHIEF DRAFTSMAN
CHECKED	ST	CHIEF DRAFTSMAN

SUBMITTED: *SHR*

ORD. DEPT. U. S. A.

WAS C121076

DO NOT INSCRIBE PART NO.

5621076

APPROVED BY ORDER OF THE CHIEF OF ORDNANCE.

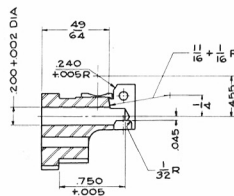
*Walter A. Anderson*

ORDNANCE DEPT., U. S. A.

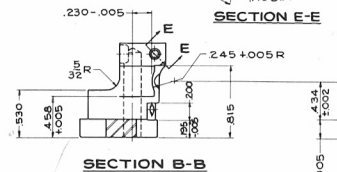
MADE AT ROCK ISLAND ARSENAL



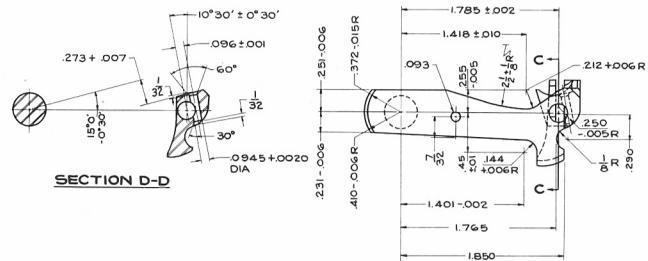
C5621076



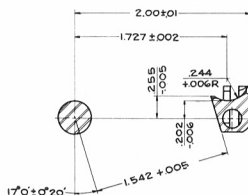
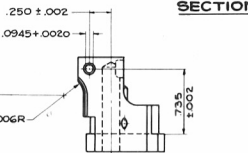
### SECTION C-C



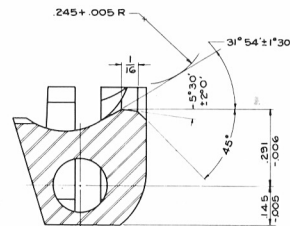
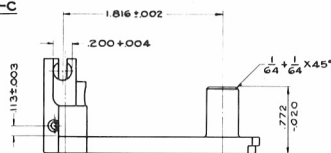
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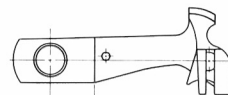
SECTION D-D



SECTION A-A



PARTIAL SECTION A-A

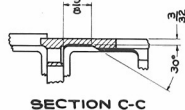
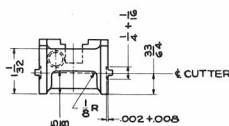
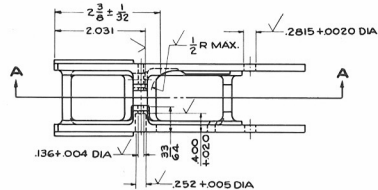
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.195-.005 (TO AVOID MATCH-  
ING CUTS)

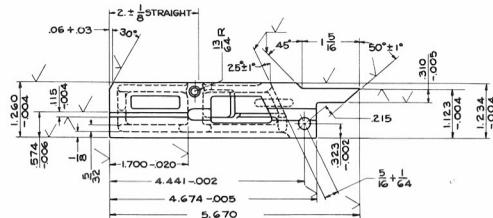
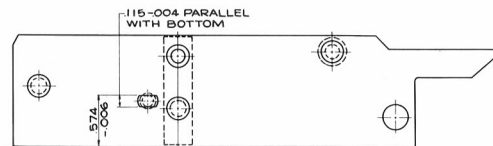
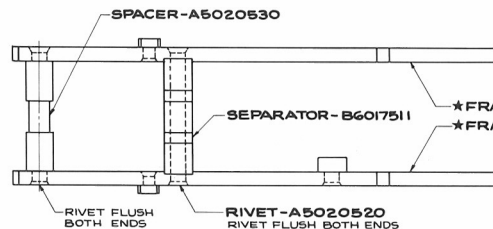
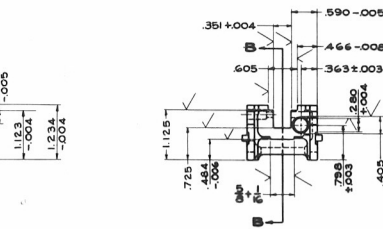
**VIEWS SHOWING ALTERNATIVE  
METHOD OF MANUFACTURE**

DO	INSCRIBE PART NO
----	------------------

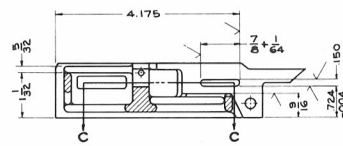
OCTOBER 30, 1942		CLASS	DIVISION	DRAWING	FILE
REVISONS					
1 5-10-40 TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMALS ± .005 FRACTIONS ± 1/64 ANGULAR ± 5°					
		TRAVERSE	"X" SECTION		
		R. K. B.	Z. C.		
		TAKEOFF			
		WELD		OTHER REVISIONS	
DRG. PERTAINS TO			SUBMITTED:		
C5621076			NO REVISIONS BY DATE NO. BY DATE NO. BY DATE NO. BY DATE NO. BY DATE		
EXAMINED:			H. H. Roe APPROVED BY ORDER OF THE CHIEF OF DIVISION Hester Ackerman NO. BY DATE		
D6544087			ORDNANCE DEPT., U. S. A.		
MADE AT ROCK ISLAND					



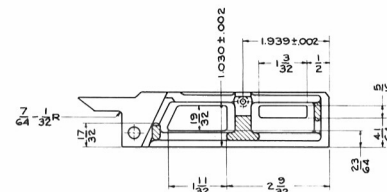
SECTION C-C

ALTERNATIVE CONSTRUCTION A  
PEARLITIC MALLEABLE IRON-CLASS AFINISH  $\sqrt{\text{V}}$  TO BE  $\frac{1}{16}$   
SCALE  $\frac{1}{4}$ 

FRAME, LOCK, ASSEMBLY 5509182



SECTION A-A



SECTION B-B

★ FINDING DIAGRAM

DO NOT INSCRIBE PART NO.

DATE	CLASS	DIVISION	DRAWING	FILE
AUGUST 10, 1944				
REVISIONS				
16 5-10-48				
TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMALS .006 FRACTIONAL $\frac{1}{16}$ 1/64 ANGULAR 1°				
SUBMITTED:				
EXAMINED:				
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE				
MADE AT ROCK ISLAND Arsenal				

NOTE:

SECTION D-D:  
HEAT IN NEUTRAL SALT BATH AT 1500° F FOR  
10 MINUTES, OIL QUENCH, DRAW AT 950° F FOR  
30 MINUTES, AIR COOL.

SECTION E-E:  
HEAT IN CYANIDE AT 1500°-1550° F FOR 5  
MINUTES, OIL QUENCH, DRAW AT APPROX  
750° F IN SALT BATH FOR 30 MINUTES,  
AIR COOL, ROCK. C 47-52

ALL CAST RADI TO BE  $\frac{1}{16}$  UNLESS OTHERWISE  
SPECIFIED.

A 5020530

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

APRIL 4, 1927

## REVISIONS

11 5-10-48

Y. P.

RED.

SCL.

T. S.

BR.

E. L. 2

ROCK

## DRG. PERTAINS TO

05509182

30 BMG  
 M17A1 (WC)  
 M19A4 (FXD)  
 M19A4 (FLEX)  
 M19AB (FXD)  
 M19AG

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
 NOT OTHERWISE SPECIFIED

DECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm$  —

DRAFTSMAN

M.F.J.

TRACER

A.V.C.

L'D'G DRAFTSMAN

CHECKED

J.E. J.

0.0

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

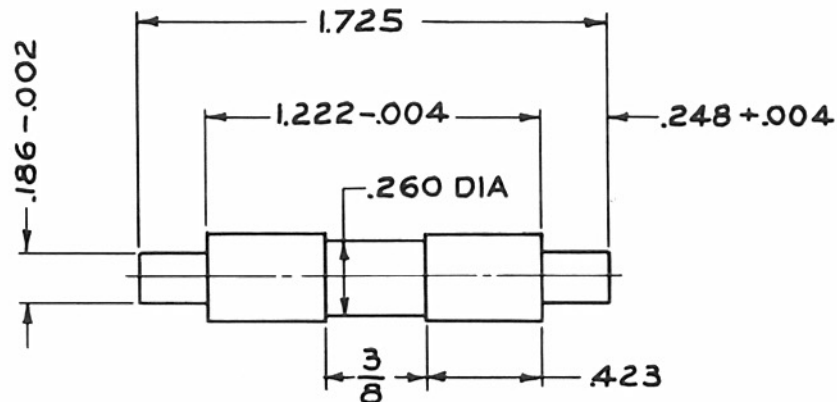
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
 OF ORDNANCE

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**SPACER, LOCK FRAME****STEEL FSX1020**

FINISH 125/

5020530

SCALE  $\frac{2}{1}$ 

WAS A20530

A 5020530



A 5020627

FEB. 1, 1927

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

Y. P.

RED.

SCL.

T. S.

BR.

EL 2

ROCK

## REVISIONS

16 5-10-48

## DRG. PERTAINS TO

C5509180

30 BMG  
 M 17A1 (WC)  
 M 19A4 (FXD)  
 M 19A4 (FLEX)  
 M 19A5 (FXD)  
 M 19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
 NOT OTHERWISE SPECIFIED

DECIMAL  $\pm .005$   
 FRACTIONAL  $\pm \frac{1}{64}$   
 ANGULAR  $\pm 5^\circ$

DRAFTSMAN

TRACER

L'D'G DRAFTSMAN

D.J.D.

L.R.E.

CHECKER

O.O.

CHIEF DRAFTSMAN

## SUBMITTED:

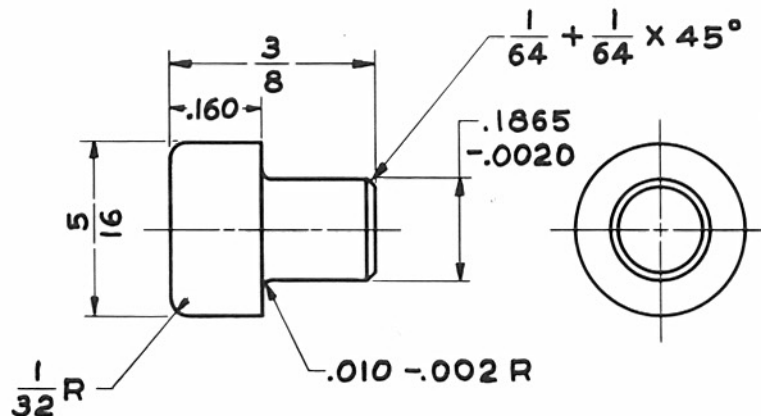
A.W. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
 OF ORDNANCE:

Walter Ackerman  
 ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**STOP, ACCELERATOR**

DRILL ROD

FINISH 125/

5020627

WAS A20627

SCALE  $\frac{4}{1}$ 

A 5020627

A 5135051

JUNE 1, 1931

REVISIONS

12 5-10-48

DRG. PERTAINS TO

C5509180

C5509181

30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 5^\circ$

DRAFTSMAN

W.C.O.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

L.R.E.

O.O.

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

Y. P.

RED.

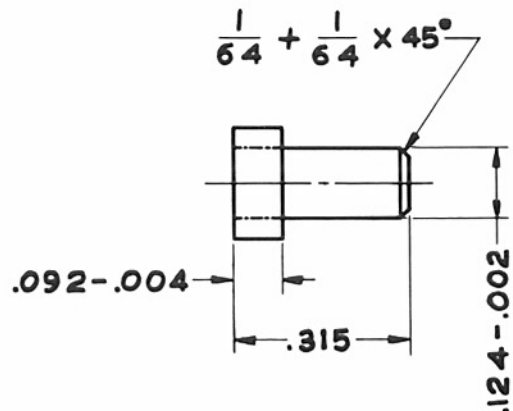
SCL.

T. S.

BR.

EL 2

ROCK



MILL AT ASSEMBLY  
C5509182

GUIDE, LOCK FRAMEDRILL RODFINISH 125

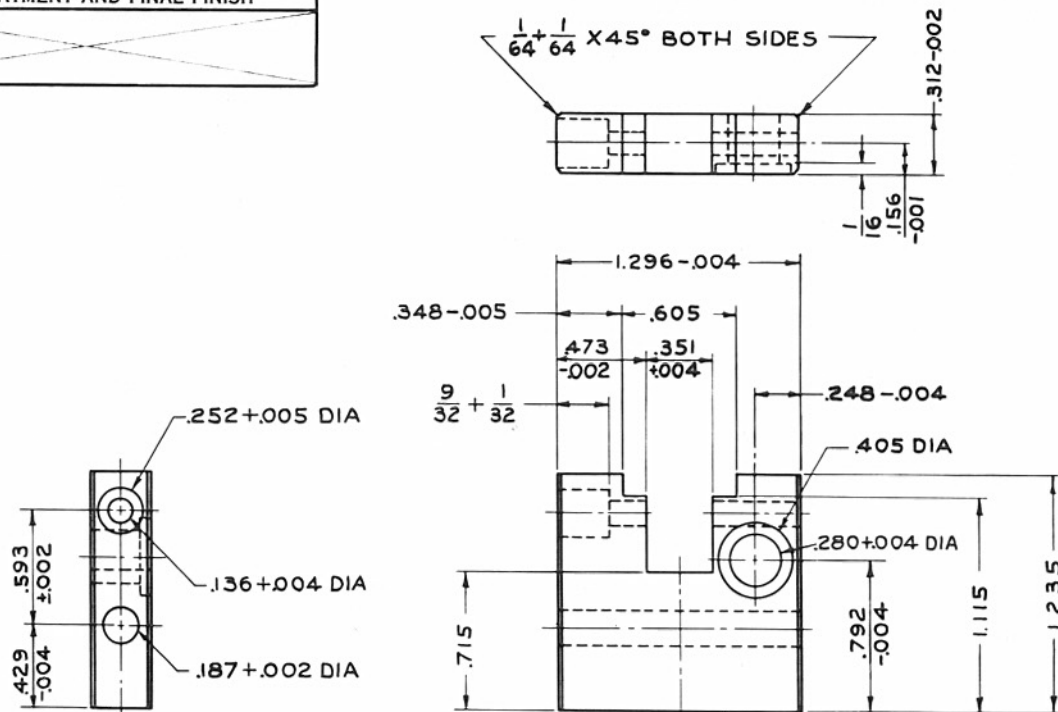
5135051

WAS A135051

SCALE  $\frac{4}{1}$ 

A 5135051

HEAT TREATMENT AND FINAL FINISH

**SEPARATOR, LOCK FRAME**

STEEL FSX1020

FINISH 125/√

6017511

SCALE 2/1

B 6017511

WAS B17511

PHYSICAL  
PROPERTIESY. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

APRIL 4, 1927

REVISIONS

16 5-10-48

DRG. PERTAINS TO

D5509182

30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± .005  
FRACTIONAL ± 1/64  
ANGULAR ± 5°

DRAFTSMAN C.S.S.	TRACER A.V.C.	C.H.F. DRAFTSMAN
CHECKER G.P.	C.H.F.	CHIEF DRAFTSMAN

SUBMITTED:

A.H. ROE

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

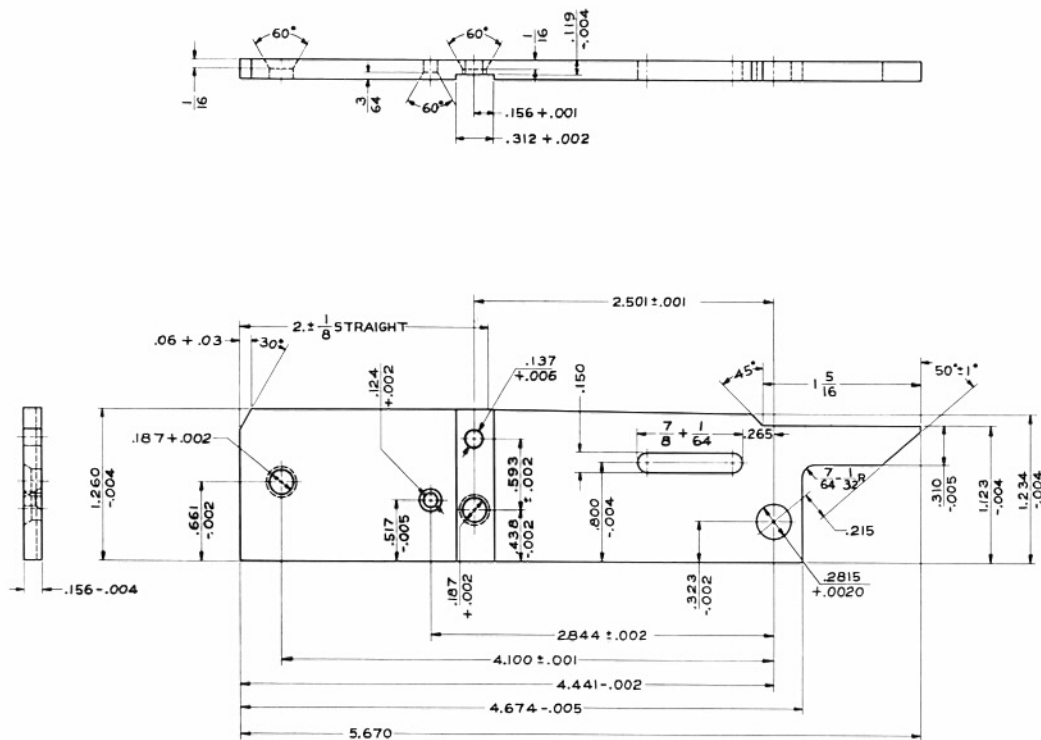
Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

B6017511

C.C.  $\frac{1}{2}$  INCH ON CAM END .004  
TO .008 DEEP (ROCK A74-78)



FRAME, LOCK, L.H.  
LOW ALLOY STEEL, HIGH TENSILE - GRADE 2  
FINISH 125

5508471

WAS C8471

DO NOT INSCRIBE PART NO.

SCALE  $\frac{2}{1}$ 

C5508471

[illegible]

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$

DRAFTSMAN	TRACER	U.S. DRAFTSMAN
B.T.H.	L.R.E.	
CHIEF		CHIEF DRAFTSMAN

SUBMITTED: \_\_\_\_\_

A. H. Roe

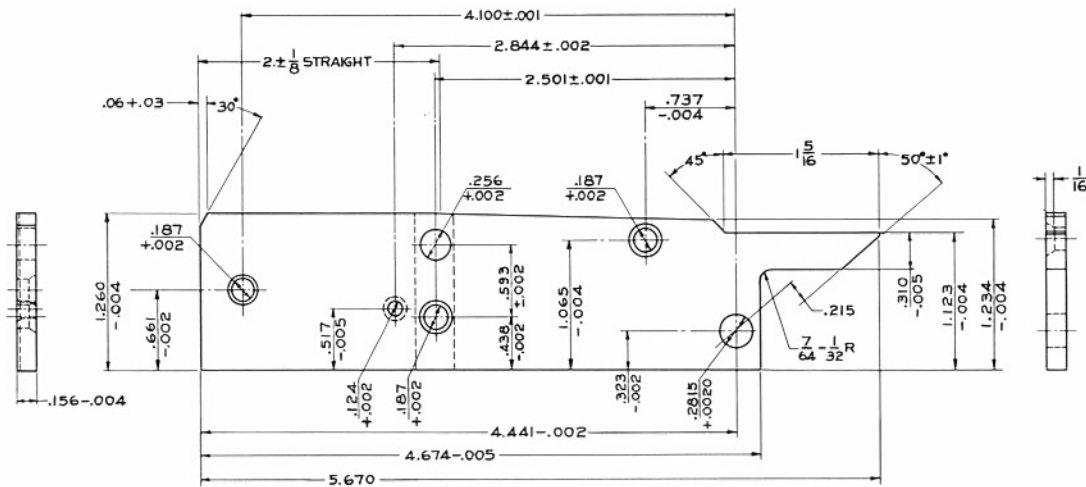
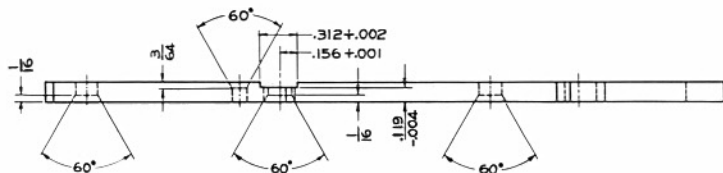
ORD DEPT U S A  
APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE

Walter Ackerman  
ORD. DEPT. U.S.A.

ORDNANCE DEPT., U. S. A.

**C5508471**

C.C.  $\frac{1}{2}$  INCH ON CAM END .004 TO .008 DEEP  
(ROCK. A74-78)



FRAME, LOCK, R.H.  
LOW ALLOY STEEL, HIGH TENSILE - GRADE 2  
FINISH 125 (5)08472

DO NOT INSCRIBE PART NO.

SCALE  $\frac{2}{1}$ 

C 5508472

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL = .005  
FRACTIONAL = 1/64  
ANGULAR = 5°

DRYBATHMAN B.T.M.	TRACER E.B.	LOG DRYBATHMAN
CHIEF DRYBATHMAN	CHIEF TRACER	CHIEF DRYBATHMAN

**SUBMITTED:**

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:  
*Walter Ackeroma*  
ORD. DEPT. U. S. A.  
ORDNANCE DEPT., U. S. A.  
MADE AT ROCK ISLAND ARSENAL

[illegible]

**C5508472**



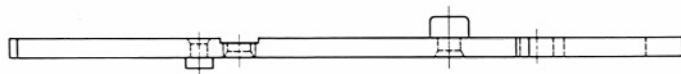
HEAT TREATMENT AND FINAL FINISH	
X	

PROPERTIES	
Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	
SCL.	

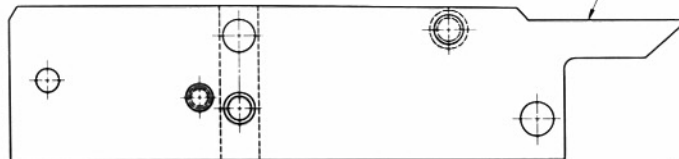
REVISIONS			
11	5-10-40		

D550918Z	.30 BMG- M17A1(WC)
	.30 BMG
	M19A4(FXD)
	.30 BMG
	M19A4(FLEX)
	.30 BMG
	M19A5(FXD)
	.30 BMG
	M19A6

30 BMG  
M17A1(WC)  
30 BMG  
M19A4(FXD)  
30 BMG  
M19A4(FLEX)  
30 BMG  
M19A5(FXD)  
30 BMG  
M19A6



**STOP-A5020627**



GUIDE-A5135051

5509180

DECIMAL  $\pm$  —  
FRACTIONAL  $\frac{\pm}{\pm}$  —  
ANGULAR  $^{\circ}$  —

ENGINEER	CHIEF DRAFTSMAN
----------	-----------------

ORD DEPT. U. S. A.

DO NOT INSCRIBE PART NO.

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5509180

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

*Julius Rosenberg*  
OND. DEPT. U. S. A.

MADE AT ROCK ISLAND ARSENAL

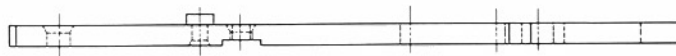


HEAT TREATMENT AND FINAL FINISH

PHYSICAL PROPERTIES		JUNE 1, 1931	
		REVISIONS	
Y. P.		11	5-10-40
T. S.			
EL. 2			
RED			
BR.			
ROCK.			
SCL.			

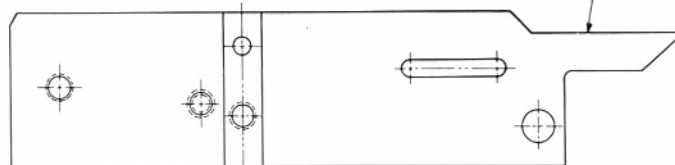
DRG. PERTAINS TO

055091B2	.30 BMG M17A1 (WC)
	.30 BMG M19A4 (FXD)
	.30 BMG M19A4 (FLEX)
	.30 BMG M19A5 (FXD)
	.30 BMG M19A6



FRAME-C5508471

GUIDE-A5135051



FRAME, LOCK, L.H., ASSEMBLY

55091B1

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL : —

FRACTIONAL : —

ANGULAR : —

DRAFTSMAN: M.E.B. CHECKED: M.C. U.S. DRAFTSMAN

SUBMITTED: H.H. Roe

APPROVED BY ORDER OF THE CHIEF OF ORDNANCE: Walter C. ...

ORDNANCE DEPT., U. S. A.

WAS C91B1

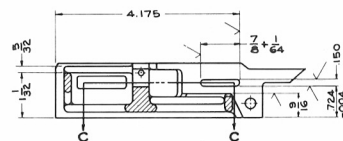
DO NOT INSCRIBE PART NO.

C 55091B1

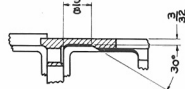
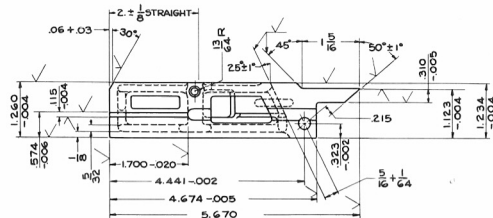


MADE AT ROCK ISLAND ARSENAL

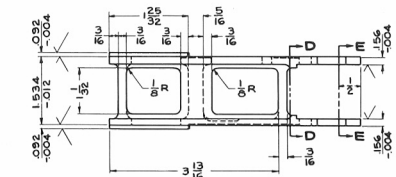
C55091B1



**SECTION A-A**



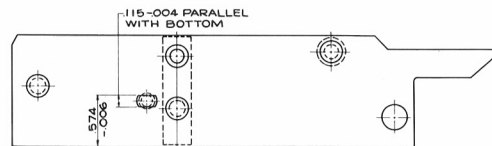
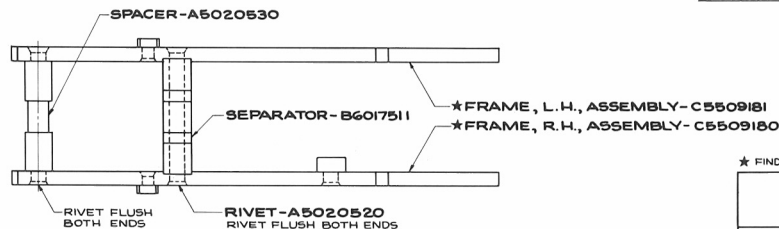
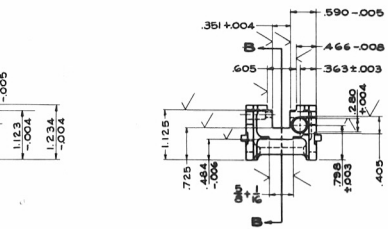
**SECTION C-C**



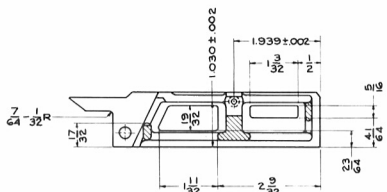
**ALTERNATIVE CONSTRUCTION A**  
PEARLITIC MALLEABLE IRON-CLASS A

FINISH ✓ TO BE 125 ✓

SCALE  $\frac{1}{1}$



FRAME, LOCK, ASSEMBLY (5509182)



**SECTION B-B**

**NOTE:**

SECTION D-D :

HEAT IN NEUTRAL SALT BATH AT 1500°F FOR 10 MINUTES, OIL QUENCH, DRAW AT 950°F FOR 30 MINUTES, AIR COOL.

SECTION E-E:

HEAT IN CYANIDE AT 1500°-1550° F FOR 5 MINUTES, OIL QUENCH, DRAW AT APPROX 750° F IN SALT BATH FOR 30 MINUTES, AIR COOL, ROCK. C 47-52

ALL CAST RADI TO BE  $\frac{1}{16}$  UNLESS OTHERWISE SPECIFIED.

★ FINDING DIAGRAM

DO NOT INSCRIBE PART NO.

AUGUST 10, 1944 REVISIONS 16 5-10-44	CLASS DIVISION DRAWING FILE  TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL: 2 OOB FRACTIONS: 1/8" ANGLUAR: 2° "HOLD" "HOLD" TYPED H.S. C. Z. C. TYPED CHECKED 10/11/44 SUBMITTED: <i>A.H. Roe</i> EXAMINED: 51-104-1 30 BOMB W/INFA 51-104-2 30 BOMB W/INFA 51-104-3 30 BOMB W/INFA 51-104-4 30 BOMB W/INFA 51-104-5 30 BOMB W/INFA 51-125-1 30 BOMB W/INFA 51-125-2 30 BOMB W/INFA 51-125-3 30 BOMB W/INFA 51-125-4 30 BOMB W/INFA 51-125-5 30 BOMB W/INFA 51-125-6 30 BOMB W/INFA 51-125-7 30 BOMB W/INFA 51-125-8 30 BOMB W/INFA 51-125-9 30 BOMB W/INFA 51-125-10 30 BOMB W/INFA 51-125-11 30 BOMB W/INFA 51-125-12 30 BOMB W/INFA 51-125-13 30 BOMB W/INFA 51-125-14 30 BOMB W/INFA 51-125-15 30 BOMB W/INFA 51-125-16 30 BOMB W/INFA 51-125-17 30 BOMB W/INFA 51-125-18 30 BOMB W/INFA 51-125-19 30 BOMB W/INFA 51-125-20 30 BOMB W/INFA 51-125-21 30 BOMB W/INFA 51-125-22 30 BOMB W/INFA 51-125-23 30 BOMB W/INFA 51-125-24 30 BOMB W/INFA 51-125-25 30 BOMB W/INFA 51-125-26 30 BOMB W/INFA 51-125-27 30 BOMB W/INFA 51-125-28 30 BOMB W/INFA 51-125-29 30 BOMB W/INFA 51-125-30 30 BOMB W/INFA 51-125-31 30 BOMB W/INFA 51-125-32 30 BOMB W/INFA 51-125-33 30 BOMB W/INFA 51-125-34 30 BOMB W/INFA 51-125-35 30 BOMB W/INFA 51-125-36 30 BOMB W/INFA 51-125-37 30 BOMB W/INFA 51-125-38 30 BOMB W/INFA 51-125-39 30 BOMB W/INFA 51-125-40 30 BOMB W/INFA 51-125-41 30 BOMB W/INFA 51-125-42 30 BOMB W/INFA 51-125-43 30 BOMB W/INFA 51-125-44 30 BOMB W/INFA 51-125-45 30 BOMB W/INFA 51-125-46 30 BOMB W/INFA 51-125-47 30 BOMB W/INFA 51-125-48 30 BOMB W/INFA 51-125-49 30 BOMB W/INFA 51-125-50 30 BOMB W/INFA 51-125-51 30 BOMB W/INFA 51-125-52 30 BOMB W/INFA 51-125-53 30 BOMB W/INFA 51-125-54 30 BOMB W/INFA 51-125-55 30 BOMB W/INFA 51-125-56 30 BOMB W/INFA 51-125-57 30 BOMB W/INFA 51-125-58 30 BOMB W/INFA 51-125-59 30 BOMB W/INFA 51-125-60 30 BOMB W/INFA 51-125-61 30 BOMB W/INFA 51-125-62 30 BOMB W/INFA 51-125-63 30 BOMB W/INFA 51-125-64 30 BOMB W/INFA 51-125-65 30 BOMB W/INFA 51-125-66 30 BOMB W/INFA 51-125-67 30 BOMB W/INFA 51-125-68 30 BOMB W/INFA 51-125-69 30 BOMB W/INFA 51-125-70 30 BOMB W/INFA 51-125-71 30 BOMB W/INFA 51-125-72 30 BOMB W/INFA 51-125-73 30 BOMB W/INFA 51-125-74 30 BOMB W/INFA 51-125-75 30 BOMB W/INFA 51-125-76 30 BOMB W/INFA 51-125-77 30 BOMB W/INFA 51-125-78 30 BOMB W/INFA 51-125-79 30 BOMB W/INFA 51-125-80 30 BOMB W/INFA 51-125-81 30 BOMB W/INFA 51-125-82 30 BOMB W/INFA 51-125-83 30 BOMB W/INFA 51-125-84 30 BOMB W/INFA 51-125-85 30 BOMB W/INFA 51-125-86 30 BOMB W/INFA 51-125-87 30 BOMB W/INFA 51-125-88 30 BOMB W/INFA 51-125-89 30 BOMB W/INFA 51-125-90 30 BOMB W/INFA 51-125-91 30 BOMB W/INFA 51-125-92 30 BOMB W/INFA 51-125-93 30 BOMB W/INFA 51-125-94 30 BOMB W/INFA 51-125-95 30 BOMB W/INFA 51-125-96 30 BOMB W/INFA 51-125-97 30 BOMB W/INFA 51-125-98 30 BOMB W/INFA 51-125-99 30 BOMB W/INFA 51-125-100 30 BOMB W/INFA 51-125-101 30 BOMB W/INFA 51-125-102 30 BOMB W/INFA 51-125-103 30 BOMB W/INFA 51-125-104 30 BOMB W/INFA 51-125-105 30 BOMB W/INFA 51-125-106 30 BOMB W/INFA 51-125-107 30 BOMB W/INFA 51-125-108 30 BOMB W/INFA 51-125-109 30 BOMB W/INFA 51-125-110 30 BOMB W/INFA 51-125-111 30 BOMB W/INFA 51-125-112 30 BOMB W/INFA 51-125-113 30 BOMB W/INFA 51-125-114 30 BOMB W/INFA 51-125-115 30 BOMB W/INFA 51-125-116 30 BOMB W/INFA 51-125-117 30 BOMB W/INFA 51-125-118 30 BOMB W/INFA 51-125-119 30 BOMB W/INFA 51-125-120 30 BOMB W/INFA 51-125-121 30 BOMB W/INFA 51-125-122 30 BOMB W/INFA 51-125-123 30 BOMB W/INFA 51-125-124 30 BOMB W/INFA 51-125-125 30 BOMB W/INFA 51-125-126 30 BOMB W/INFA 51-125-127 30 BOMB W/INFA 51-125-128 30 BOMB W/INFA 51-125-129 30 BOMB W/INFA 51-125-130 30 BOMB W/INFA 51-125-131 30 BOMB W/INFA 51-125-132 30 BOMB W/INFA 51-125-133 30 BOMB W/INFA 51-125-134 30 BOMB W/INFA 51-125-135 30 BOMB W/INFA 51-125-136 30 BOMB W/INFA 51-125-137 30 BOMB W/INFA 51-125-138 30 BOMB W/INFA 51-125-139 30 BOMB W/INFA 51-125-140 30 BOMB W/INFA 51-125-141 30 BOMB W/INFA 51-125-142 30 BOMB W/INFA 51-125-143 30 BOMB W/INFA 51-125-144 30 BOMB W/INFA 51-125-145 30 BOMB W/INFA 51-125-146 30 BOMB W/INFA 51-125-147 30 BOMB W/INFA 51-125-148 30 BOMB W/INFA 51-125-149 30 BOMB W/INFA 51-125-150 30 BOMB W/INFA 51-125-151 30 BOMB W/INFA 51-125-152 30 BOMB W/INFA 51-125-153 30 BOMB W/INFA 51-125-154 30 BOMB W/INFA 51-125-155 30 BOMB W/INFA 51-125-156 30 BOMB W/INFA 51-125-157 30 BOMB W/INFA 51-125-158 30 BOMB W/INFA 51-125-159 30 BOMB W/INFA 51-125-160 30 BOMB W/INFA 51-125-161 30 BOMB W/INFA 51-125-162 30 BOMB W/INFA 51-125-163 3
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HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B

PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED.

BR.

ROCK

SCL.

OCTOBER 7, 1943

REVISIONS

5	5-10-48		

DRG. PERTAINS TO

51-10-1	.30 BMG M17A1 (WC)
51-83-1	.30 BMG M19A4 (FXD)
51-84-1	.30 BMG M19A4 (FLEX)
51-114-1	.30 BMG M19A5 (FXD)
51-125-1	.30 BMG M19A6

DO

INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm$  —  
FRACTIONAL  $\pm$  —  
ANGULAR  $\pm$  —

DRAFTSMAN L.M.D.	TRACER <i>Plw</i>	L'D'G DRAFTSMAN
CHECKER <i>R. J. H.</i>	<i>00</i>	CHIEF DRAFTSMAN

SUBMITTED:

*A.H. Poe*

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

*Walter A. Johnson*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

PLUNGER-A5238204

LATCH-C7106872

PIN-BFDX1, 505484 (STAKE BOTH ENDS)

SPRING-A7106092

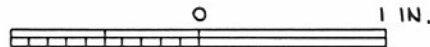
PLUG-A7106869

PLUNGER-A7106870

LATCH, ASSEMBLY

7106949

SUPERSEDES B7106949 WO/C 5-10-48



B 7106949

B7106949

A 5238204

JUNE 3, 1943

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.		RED.		SCL.	
T. S.		BR.		C. C.	.005-.010 DEEP
EL 2		ROCK			

REVISIONS

5	5-10-48		
6	3-7-49		

DRG. PERTAINS TO

B7106949

30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm \frac{1}{64}$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

H. W. J.

TRACER

M. C.

L'D'G DRAFTSMAN

CHECKER

H. W. J.

O. O.

CHIEF DRAFTSMAN

SUBMITTED:

A. H. Roe

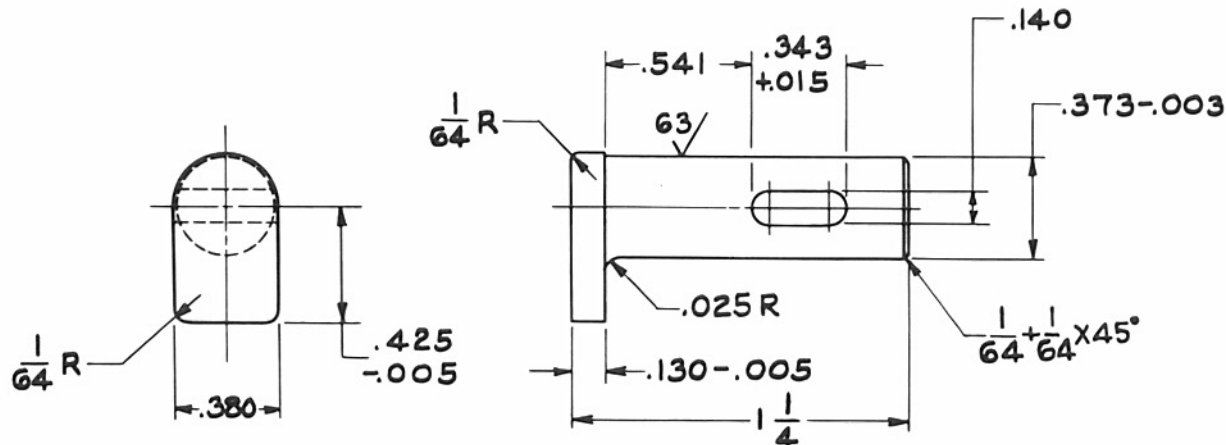
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



PLUNGER, LATCH

STEEL FSX1020

5238204

FINISH  $\frac{125}{\sqrt{}}$ , OTHER SURFACES,  
AS SPECIFIED

NOTE: R.I.A. FORGING SHOWN ON DRG. A 7101712

WAS A238204

SCALE  $\frac{2}{1}$ 

A 5238204

A7106092

## HEAT TREATMENT &amp; FINAL FINISH

DRAW AT 450°F  
 TYPE I FINISH, CLASS OSC  
 BAKE ONE HOUR AT 300-350°F

MAX. O.D. AT MIN. OPERATING HEIGHT — .360  
 MINIMUM OPERATING HEIGHT — 1.437  
 LOAD AT MIN. OPERATING HEIGHT — 11.7 ± 1. LB  
 LB. PER INCH OF SPRING DEFLECTION — 8.5  
 SPRING FUNCTIONS IN HOLE — .378 ± .003  
 OUTSIDE DIAM. SOLID, NOT MORE THAN — .345  
 INSIDE DIAM. FREE, NOT LESS THAN —  
 ASSEMBLED HEIGHT — 1.640  
 LOAD AT ASSEMBLED HEIGHT — 10. ± 1. LB  
 SOLID HEIGHT, NOT MORE THAN — 1.215  
 DIAM. OF WIRE (APPROX.) — .045  
 FREE HEIGHT (APPROX.) — 2.8125  
 NUMBER OF COILS (APPROX.) — 27  
 DIRECTION OF COILING — R.H. OR L.H.  
 ENDS CLOSED AND GROUND FLAT. — SQ & GR.

CAUTION: DO NOT COMPRESS SOLID

**SPRING, LATCH****SPRING STEEL WIRE WD1085 SPECIAL-CLASS A**

(7106092)

SUPERSEDES A7106092 WO/C 5-10-48

PHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL-2	
RED.	
HT. T.	
BR.	
SCL.	
C. C.	

MARCH 9, 1944

## REVISIONS

3	5-10-48		

## DRG. PERTAINS TO

B7106949	30 BM6 M17A1 (WC) M19A4 (FXD) M19A4 (FLEX) M19A5 (FXD) M19A6

## SYMBOL

DRAFTSMAN W.B.H.	TRACER M.C.	ENGINEER
CHECKER H.W.H.	O.O.	ENGINEER

SUBMITTED:-

*A.H. Roe*

ORD. DEPT., U. S. A.

APPROVED:-

*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

A 7106092



## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

A7106869

OCTOBER 7, 1943

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

C.C.

.005-.010  
DEEP

EL. 2

ROCK

## REVISIONS

4 5-10-48

## DRG. PERTAINS TO

B7106949

.30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm 1^\circ$ 

DRAFTSMAN

H.W.J.

TRACER

A.V.C.

L'D'G DRAFTSMAN

CHECKER

H.W.J.

CHIEF DRAFTSMAN

O.O.

## SUBMITTED:

A.H. Roe

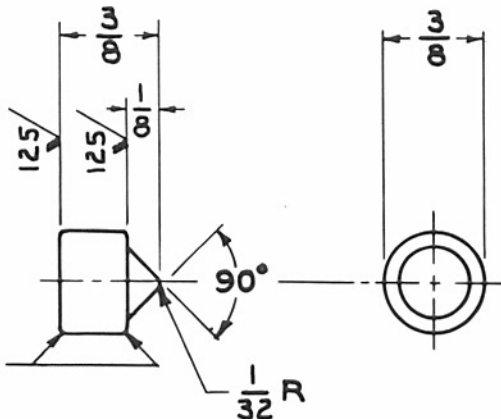
APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

BREAK CORNER .010

PLUG, RETAINING  
STEEL FS1020

7106869

FINISH  $\sqrt[63]{V}$ , OTHER SURFACES, AS SPECIFIEDSCALE  $\frac{2}{1}$ 

SUPERSEDES A7106869 WO/C 5-10-48

A 7106869

A 7106870

OCTOBER 7, 1943

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.		RED.		SCL.	
T. S.		BR.		C. C.	.005-.010 DEEP
E. L. 2		ROCK			

REVISIONS

4	5-10-48		

DRG. PERTAINS TO

B7106949	.20 BMG
	M 17A1 (WC)
	M 19A4 (FXD)
	M 19A4 (FLEX)
	M 19A5 (FXD)
	M 19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 1^\circ$

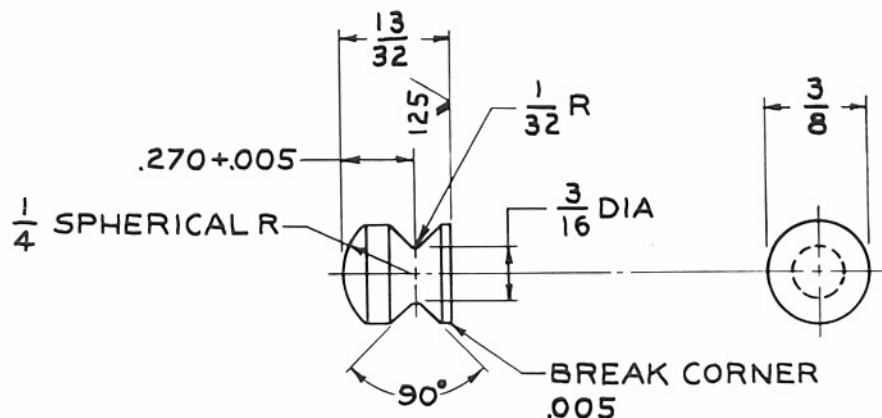
DRAFTSMAN H.W.J.	TRACER A.V.C.	L'D'G DRAFTSMAN
CHECKER H.W.J.	0.0.	CHIEF DRAFTSMAN

SUBMITTED:

*A.H. Roe*APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**PLUNGER, FRICTION****STEEL FS 1020**

7106870

FINISH  $\frac{63}{\sqrt{}}$ , OTHER SURFACES AS SPECIFIEDSUPERSEDES A 7106870 WO/C 5-10-48 SCALE  $\frac{2}{1}$  **A 7106870**

HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B

PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED.

BR.

ROCK

SCL.

OCTOBER 7, 1943

REVISIONS

5 5-10-48

DRG. PERTAINS TO

51-10-1

.30 BMG  
M17A1 (WC)

51-83-1

.30 BMG  
M19A4 (FXD)

51-84-1

.30 BMG  
M19A4 (FLEX)

51-114-1

.30 BMG  
M19A5 (FXD)

51-125-1

.30 BMG  
M19A6

DO

INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ±  
FRACTIONAL ± —  
ANGULAR ± —DRAFTSMAN  
L.M.D.TRACER  
*Plw*

L'D'G DRAFTSMAN

CHECKER  
*R. J. H.*

CHIEF DRAFTSMAN

SUBMITTED:

*A. H. Poe*APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter C. Johnson*  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

PLUNGER-A5238204

LATCH-C7106872

PIN-BFDX1, 505484 (STAKE BOTH ENDS)

SPRING-A7106092

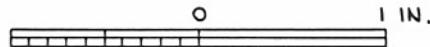
PLUG-A7106869

PLUNGER-A7106870

LATCH, ASSEMBLY

7106949

SUPERSEDES B7106949 WO/C 5-10-48



B 7106949

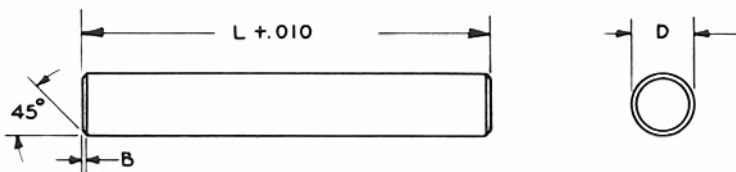
B7106949

# PIN, STRAIGHT, STEEL CHAMFERED

## BFDXI

ORDNANCE DEPT STANDARDS (ORDNANCE DESIGN)

WGLH  
APPROVED 1-31-34  
DATE



D OF PIN B CHAMFER	DIAMETER OF PIN B CHAMFER	{ NOM. MAX. MIN. }	1/16	3/32	1/8	5/32	3/16	
			.0630 .0620 .010	.0942 .0932 .010	.1255 .1245 .010	.1567 .1557 1/64	.1880 .1870 1/64	

L LENGTH	ORDNANCE PART NUMBER - PLAIN FINISH						
1/8	505461	544188					
3/16	505462	544072	544019				
1/4	505463	505470					
5/16	505464	505471	544029				
3/8	505465	505472	505481				
7/16	505466	505473	505482	544020	544055		
1/2	505467	505474	505483	505494			
9/16	505468	505475	505484	505495	544028		
5/8	505469	505476	505485	505496	505506		
11/16		505477	505486	505497	505508		
3/4		505478	505487	505498	505509		
13/16	544070	505479	505488	505499	505510		
7/8		505480	505489	505500	505511		
15/16			505491	505501	505512		
1			505492	505502	505513		
1-1/8			505493	505503	505514		
1-1/4				505504	505515		
1-3/8				505505	505516		
1-1/2	426778				505517		
1-5/8		544075			505518		
1-3/4					505519		

L LENGTH	ORDNANCE PART NUMBER - PHOSPHATE (OILED) FINISH						
5/8					505507		
7/8					582953		
1-1/8			505490				
1-3/8			544179				
					582954		

**MATERIAL:** DRILL ROD, COMMERCIAL. TOLERANCE ON DRILL ROD  $\pm .0005$ ". DIMENSIONS IN INCHES.

**NOMENCLATURE PATTERN:** PIN, STRAIGHT, DRILL ROD, 1/8" x 1/2", PLAIN, DRG. BFDXI, PART NUMBER 505483.

**NOTE:** PINS SHOULD BE .0005" TO .001" DRIVE FIT.

HEAT TREATMENT AND FINAL FINISH

HEAT TREAT (SEE NOTE)  
TYPE II FINISH, CLASS B

PHYSICAL PROPERTIES		OCTOBER 7, 1943	
		REVISIONS	
Y. P.		11	5-10-48
T. S.		12	5-7-49
EL. 2			
RED			
BR.			
ROCK.	A78-A82		
SCL.			

DRG. PERTAINS TO

87106949 .30 BMG  
M 17A1 (WC)  
.30 BMG  
M 19A4 (FXD)  
.30 BMG  
M 19A4 (FLEX)  
.30 BMG  
M 19A5 (FXD)  
.30 BMG  
M 19A6

SEE NOTE

NOTE: HARDEN  
THIS AREA

.005R MAX.

.085+.006

.091-.004

SECTION A-A

SCALE  $\frac{1}{1}$ 

**LATCH**  
PEARLITIC MALLEABLE IRON-CLASS A  
FINISH  $\sqrt{\text{V}}$  TO BE  $\sqrt{\text{V}}$

7106872

NOTE: F.I.A. FORGING FOR ALTERNATIVE MATERIAL SHOWN ON C7101711

SCALE  $\frac{1}{1}$ 

DO NOT INSCRIBE PART NO.

C 7106872

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL:  $\pm .005$   
FRACTIONAL:  $\pm 1/64$   
ANGULAR:  $\pm 1^\circ$

DRAWN BY: *A.M. 12* CHECKED BY: *O.K.*  
DATE: *10/7/43* DATE: *10/7/43*

SUBMITTED:

*A.H. ROE*  
ORD. DEPT. U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:  
*Walter C. Anderson*  
ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

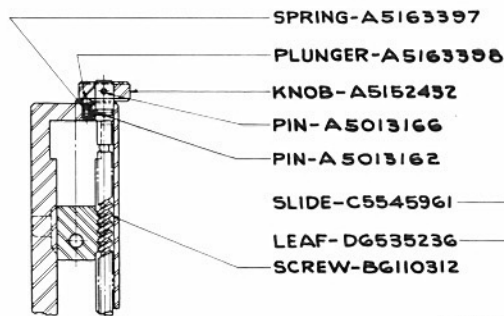
SUPERSEDES C7106872 WO/C 5-10-48

C7106872

HEAT TREATMENT AND FINAL FINISH

PHYSICAL PROPERTIES		MARCH 10, 1939	
		REVISIONS	
Y. P.		4	5-10-48
T. S.		5	10-21-48
EL. 2		6	11-15-48
RED.			
BR.			
ROCK.			
SCL.			
		DRG. PERTAINS TO	

C5545964 DO B.M.G.  
M 1944 (FAD)  
M 1944 (FLEX)  
M 1946

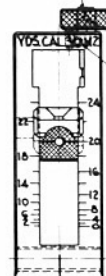


SECTION A-A

HOLE DRILLED IN SCREW FROM KNOB WHEN INDEX LINE ON SLIDE IS ALIGNED WITH MIL GRADUATION 48 AND CLICK IS ENGAGED IN GROOVE OF KNOB.



INSCRIBE PART NUMBER  
1/16" HIGH



.0500+.0005

RVET OR STAKE  
PIN ON BOTH ENDS

LEAF, REAR SIGHT, ASSEMBLY

C5545964



WAS C45964

C5545964

DO  
INSCRIBE PART NO.

~~DO NOT~~

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL : =  
FRACTIONAL : =  
ANGULAR : =

PREPARED BY H.M.F. *[Signature]* CHECKED BY *[Signature]* DESIGNED BY *[Signature]* FIRST DRAFTSMAN *[Signature]*

SUBMITTED:

*A.H. Poe*

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:  
*Walter D. Anderson*  
ORD. DEPT. U. S. A.

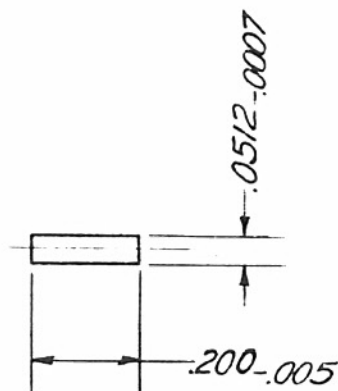
MADE AT ROCK ISLAND ARSENAL

C5545964



## HEAT TREATMENT &amp; FINAL FINISH

PROTECTIVE FINISH TYPE II CLASS A OR B

PIN, RETAINER, REAR SIGHT ELEVATING SCREW A13162-19STEEL WD 1095  
FINISHTOLERANCE  $\pm .01$  ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED.SUPERSEDES OLD TRACING A13162  
UNDER REVISION DATE OF JUNE 15, 1936

SCALE 4

51-88	50 BMG M2118 (FX2 N)
C5545964	LEAF, REAR SIGHT, ASM.
51-102	30 BAR M1918A2
C5564208	LEAF, REAR SIGHT, ASM.
51-113	30 BAR M19
51-125	30 BMG M19A6

19<sup>2</sup> 4-30-4620<sup>3</sup> CONVERSION  
1-28-49  
21<sup>1</sup> 3-24-49PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL-2

RED.

HT. T.

BR.

SCL.

C. C.

MAY 1, 1929

## REVISIONS

6	6-15-36	11 <sup>2</sup>	6-1-39
7	9-30-36	12 <sup>2</sup>	5-1-41
8 <sup>2</sup>	5-2-38	13 <sup>1</sup>	4-16-42
9 <sup>1</sup>	2-1-39	14 <sup>1</sup>	12-18-42
10 <sup>1</sup>	3-10-39	15 <sup>2</sup>	3-23-43
16 <sup>1</sup>	7-27-43	17 <sup>1</sup>	10-12-43
18 <sup>2</sup>	6-14-45		

## DRG. PERTAINS TO

C5564061 LEAF, REAR SIGHT, ASM.

C5546037 LEAF, REAR SIGHT, ASM.

C5564054 LEAF, REAR SIGHT, ASM.

51-78 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

51-74 30 BMG M2118 (FX2 N)

## SYMBOL

OAP-1396

D. FISMAN  
E. L. J.TRACER  
W. C. B.C. D. FISMAN  
E. L. J.

SUBMITTED

APPROVED BY ORDER OF THE  
CHIEF OF ORDNANCES. I. Spence  
LT. COL. ORDN. DEPT. U.S.A.

ORDNANCE DEPT. U.S.A.

DO NOT INSCRIBE PART NO.

A5013162

A13162

SUPERSEDES A13162

A.501.3162

A13166

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

MAY 1, 1929.

Y.P.

RED.

ROCK.

## REVISIONS

T.S.

BR.

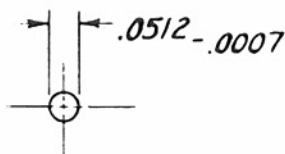
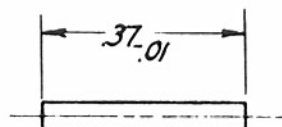
16<sup>2</sup> 6-16-4417<sup>2</sup> 4-30-4618<sup>3</sup> CONVERSION  
1-28-4919<sup>1</sup> 3-24-49

PROTECTIVE FINISH TYPE II CLASS A OR B.

DO NOT INSCRIBE PART NO.

## DR'G. PERTAINS TO

51-13	30 BAR-M18
51-102	30 BAR-M1918A2
C5564208	LEAF, REAR SIGHT, ASM.
51-77	30 BMG-M19A2
C5564054	LEAF, REAR SIGHT, ASM.
51-83	30 BMG-M19A4 (FXD.)
51-84	30 BMG-M19A4 (FLEX.)
51-125	30 BMG-M19A6
C5564054	LEAF, REAR SIGHT, ASM.
51-74	30 BMG-M2HB (FXD.)
51-75	30 BMG-M2HB (FLEX.)
C5564057	LEAF, REAR SIGHT, ASM.
51-70	50 BMG-M2HB (FLEX.)
51-71	50 BMG-M2HB (FXD.)
51-88	50 BMG-M2HB (FXD.N.)
C5564061	LEAF, REAR SIGHT, ASM.



5013166

PIN, REAR SIGHT ELEVATING KNOB  
STEEL W.D. 1095  
FINISH f

(A13166-17)

TOLERANCE  $\pm .01$  ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED  
SUPERSEDES OLD TRACING A13166  
UNDER REVISION DATE OF JUNE 16, 1944.

SCALE  $\frac{4}{1}$ 

SPRINGFIELD ARMORY

A5013166

A13166

DFTSMAN <i>[Signature]</i>	TRACER <i>[Signature]</i>	L'OG DFTSMAN <i>[Signature]</i>
CHECKER <i>[Signature]</i>	876	CHIEF DFTSMAN <i>[Signature]</i>

SUBMITTED:

*[Signature]*  
HD. ORD. ENG. ORD. DEPT.

APPROVED BY ORDER OF THE  
CHIEF OF ORDNANCE:

*[Signature]*  
LT. COL. ORD. DEPT.

ORDNANCE DEPT., U. S. A.

SUPERSEDES A13166

A5013166

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

A5152432

MARCH 10, 1939

## REVISIONS

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

C. C.

.010 TO .012  
DEEP

EL. 2

ROCK

8 5-10-48

## DRG. PERTAINS TO

C5545964

.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

HDC.

TRACER

O.K.

L'D'G DRAFTSMAN

CHECKER

L.S.C.

0.0

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

 $\frac{1}{64} + \frac{1}{64} \times 45^\circ$ 

MEDIUM KNURL

 $90^\circ \pm 2^\circ$  $.052 \pm .005$  $.015 \pm .005$  $.085$ 

POLISH THIS SURFACE

 $.161 \pm .001$ 27 AFTER  
64 KNURLING

10 NOTCHES, EQUALLY SPACED

KNOB, REAR SIGHT ELEVATING SCREWSTEEL FSX1020

FINISH 125/

(5152432)

WAS A152432

SCALE  $\frac{4}{1}$ 

A 5152432

## HEAT TREATMENT &amp; FINAL FINISH

DRAW AT 450 F.

PROTECTIVE FINISH TYPE I CLASS O.S.C.

~~DO NOT~~ INSCRIBE PART NO.

MARCH 10, 1939

## REVISIONS

7	8-15-42		
8	10-24-42		
9	7-27-43		
10	2-7-44		
11	4-30-46		
12	CONVERSION 1-28-49		

DRG. PERTAINS TO

C46964	LEAF, REAR SIGHT,
	ASSEMBLY
C64200	LEAF, REAR SIGHT,
C5364208	ASSEMBLY
51-83	.30 BMG-M19A4 FXD.
51-84	.30 BMG-M19A4 FLEX.
51-102	.30 BAR-M18A2
51-113	.30 BAR-M18
51-125	.30 BMG-M19A6

Δ	DIAMETER OF WIRE .....	.0135
☆	TOTAL NUMBER OF COILS .....	5
Δ	MINIMUM INSIDE DIAMETER, FREE .....	.040
Δ	OUTSIDE DIAMETER, FREE .....	.071 ± .003
Δ	MAXIMUM OUTSIDE DIAMETER AT MINIMUM OPERATING HEIGHT .....	.075
☆	FREE LENGTH OF SPRING .....	.138
Δ	TYPE OF ENDS .....	PLAIN
☆	WOUND .....	R.H.
☆	MEAN ASSEMBLED HEIGHT .....	.106
Δ	LOAD AT MEAN ASSEMBLED HEIGHT .....	2 LBS ± 1/2 LB.
☆	MINIMUM OPERATING HEIGHT .....	.093
Δ	LOAD AT MINIMUM OPERATING HEIGHT .....	2.68 LBS. ± 1/2 LB.
☆	LBS. PER INCH OF SPRING DEFLECTION .....	62 LBS.
Δ	SPRING FUNCTIONS IN HOLE .....	.076
☆	SPRING FUNCTIONS OVER ROD .....	.038
☆	MAXIMUM SOLID HEIGHT .....	.084

Δ NOTE:-THIS SPRING SHALL WITHSTAND OPERATIONS  
BETWEEN ASSEMBLED HEIGHT AND MINIMUM OPERATING  
HEIGHT WITHOUT FAILURE AND THE LOAD AT AS-  
SEMBLED HEIGHT SHALL NOT BE LESS THAN LBS.  
AFTER 25,000 OPERATIONS. SPEED OF TEST SHALL  
NOT BE LESS THAN 500 CYCLES PER MINUTE.

Δ END COILS SHALL BE WITHIN MIN.  
INSIDE DIA. AND FREE FROM BURRS.

SPRING, CLICK, PLUNGER ~~A163397-11~~  
SPRING STEEL WIRE - WD 1085 SPECIAL CLASS A

SYMBOLS:- Δ MANDATORY REQUIREMENTS  
☆ MANUFACTURING DATA

SUPERSEDES OLD TRACING A163397  
UNDER REVISION DATE OF AUGUST 15, 1942.

5163397

A5163397

A163397

D. T. TAYLOR	THREE 2nd L.D.S. OFFICERS
R.S.	E. C. P.
CHIEF OF R.S.	CHIEF OF P.S.
M.C. 20	ED. 20

SUBMITTED

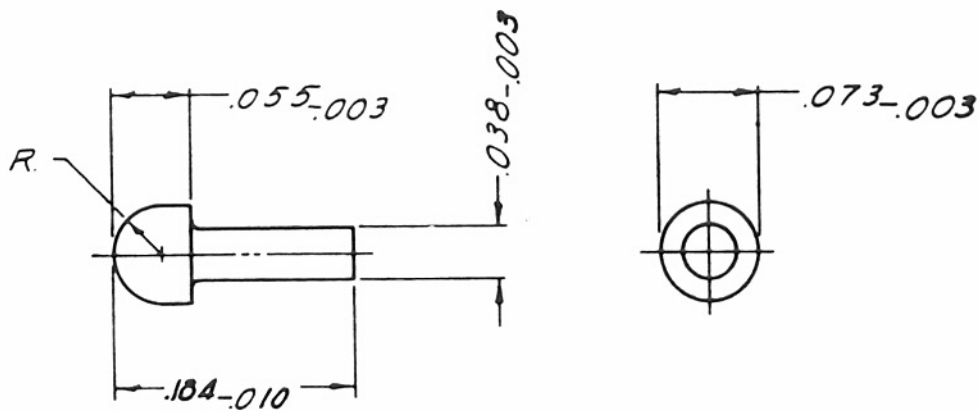
*Ent. to plain*  
PR. ORD. ENG. ORD. DEPT.  
APPROVED BY ORDER OF  
THE CHIEF OF ORDNANCE  
*W. C. 2nd*  
COL. ORD. DEPT.  
ORDNANCE DEPT. USA

SUPERSEDES A163397

A5163397

A163398

HEAT TREATMENT & FINAL FINISH		PHYSICAL PROPERTIES						MARCH 10, 1939			
HEAT TREAT  OXIDE BLACK	Y.P.		RED.		SCL.			REVISIONS			
	T.S.		BR.		C.C.	.0015-.003 DEEP		1 <sup>st</sup>	2-7-40	5 <sup>th</sup>	6-28-41
	EL. 2		ROCK.					2 <sup>nd</sup>	6-25-40	6 <sup>th</sup>	4-11-42
								3 <sup>rd</sup>	9-3-40	7 <sup>th</sup>	6-18-42
								4 <sup>th</sup>	5-1-41	8 <sup>th</sup>	10-31-42
								10 <sup>th</sup>	CONVERSION 1-28-49	9 <sup>th</sup>	7-27-43



PLUNGER, CLICK, REAR SIGHT ELEVATING SCREW KNOB  
STEEL - W D 1020 COLD DRAWN  
FINISH f

5163398  
 (A163398-3)

TOLERANCE  $\pm .01$  ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED SCALE 10/7

A5163398  
 A163398

DR'G. PERTAINS TO	
51-83	30BMG-M19A4(FXD)
51-84	30BMG-M19A4(FLEX)
51-102	30BAR-M18A2
C45964	LEAF, REAR SIGHT, ASM.
664208	LEAF, REAR SIGHT, ASM.
51-13	30BAR M18
51-125	30 BMG-M19A6
C5564208	

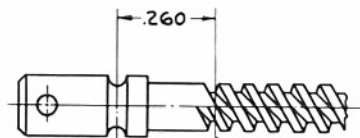
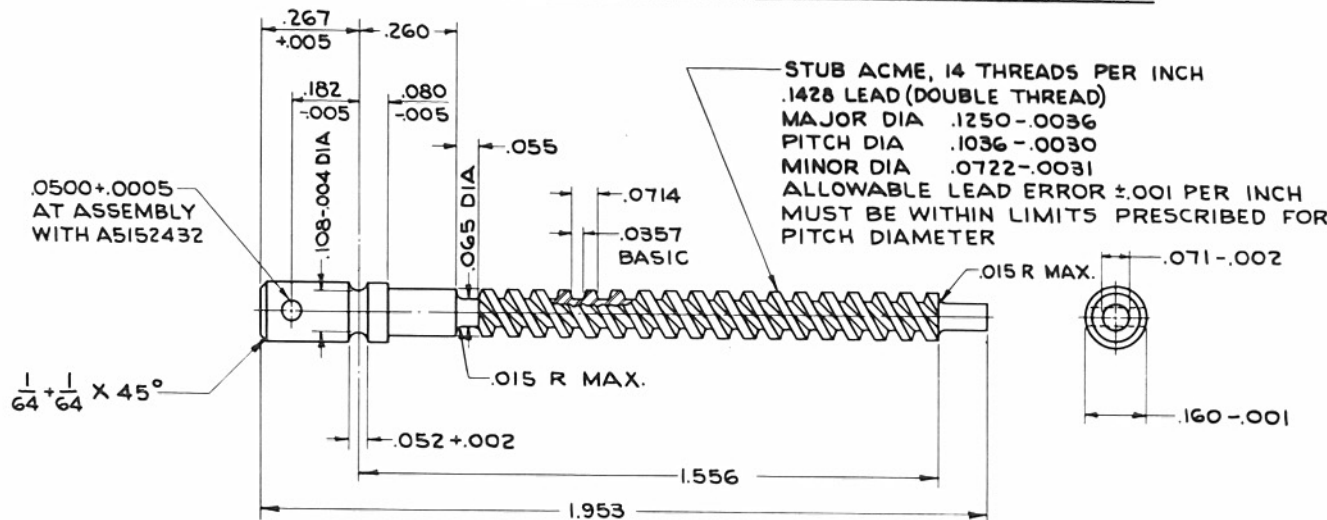
SYMBOL		
DO NOT INSCRIBE PART NO.		
DFTSMAN M. J.	TRACER M. J.	L'DR. OPTICIAN G. J. O.
CHECKER L. L. G.	CHIEF OPTICIAN J. L. G.	
SUBMITTED: Waller Sinton		
MAJ. ORD. DEPT. U. S. A.		
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE:		
S. L. Sinton LT. COL. ORD. DEPT. U. S. A.		
ORDNANCE DEPT. U. S. A.		

SUPERSEDES A163398

A 5163398

HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B

FULL THREAD DEPTH  
TO THIS POINT**ALTERNATE METHOD OF MANUFACTURE****SCREW, ELEVATING, REAR SIGHT**

STEEL F5X1315

FINISH  $\frac{63}{\sqrt{}}$ 

6110312

SCALE  $\frac{4}{1}$ 

WAS B110312

B 6110312

PHYSICAL  
PROPERTIESY. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

MARCH 10, 1939

## REVISIONS

8	5-10-48		

DRG. PERTAINS TO

C5545964 .30 BMS M19A4  
(FXD) & (FLEX)

DO NOT INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL: .005  
FRACTIONAL:  $\frac{1}{64}$   
ANGULAR: 5°

DRAFTER C.P.L.	TRACER <i>Law</i>	L.O.C. DRAFTER
CHECKER <i>W. G. Galt</i>	CHIEF DRAFTER	

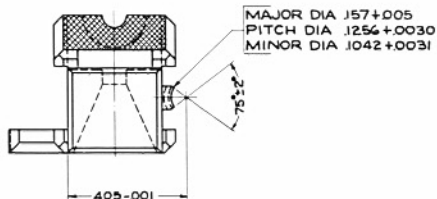
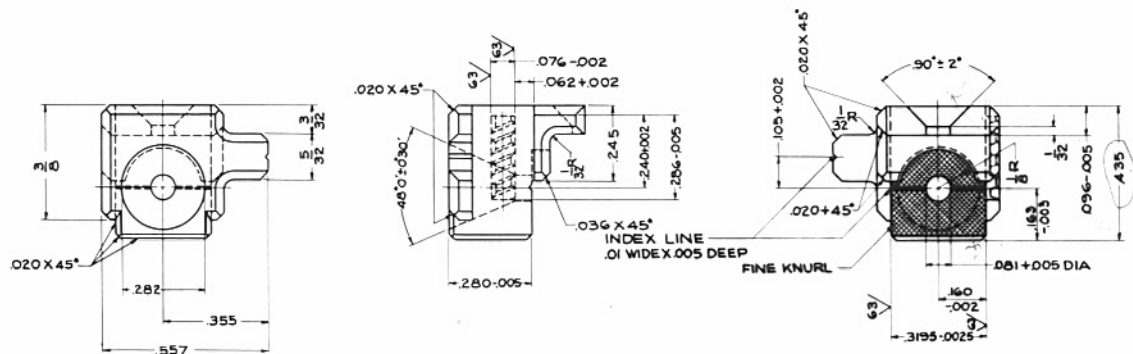
SUBMITTED:

*A.H. Poe*APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ackerman*  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

B6110312





**ALTERNATIVE MANUFACTURE  
OF STUB ACME THREAD**  
SAME AS STANDARD THREAD  
EXCEPT AS NOTED

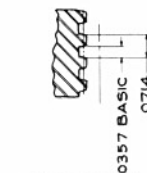
**SLIDE, REAR SIGHT**  
**STEEL FSX1020** (5545961)  
FINISH  $\sqrt{125}$  OTHER SURFACES, AS SPECIFIED

NOTE:  
INDEX LINES TO BE FILLED  
WITH WHITE ENAMEL

PHYSICAL PROPERTIES		MARCH 10, 1939	
		REVISIONS	
Y. P.		11	5-10-48
T. S.			
EL. 2			
RED			
BR.			
ROCK.			
SCL.			

DRG. PERTAINS TO

C5545964 30 BMB  
M1944 (FXD)  
M1944 (FLEX)  
M1946



## SECTION A-A

MAJOR DIA .135 ± .005  
PITCH DIA .1036 ± .0030  
MINOR DIA .0822 ± .0031  
ALLOWABLE LEAD ERROR ± .001  
PER INCH AND INCLUDES  
INDEXING ERROR, ALL OF  
WHICH MUST BE WITHIN  
LIMITS PRESCRIBED FOR  
PITCH DIAMETER

STUB ACME (DOUBLE THREAD)  
14 THREADS PER INCH  
LEAD ± .1428  
FINISH  $\sqrt{63}$

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL: ± .005  
FRACTIONAL: ± 1/64  
ANGULAR: ± 5°

DESIGNED BY: C.P.L. Z.C.  
CHECKED BY: C.P.L. Z.C.  
SUBMITTED: A.H. ROE

WAS C45961

DO NOT INSCRIBE PART NO.

SCALE 5/1

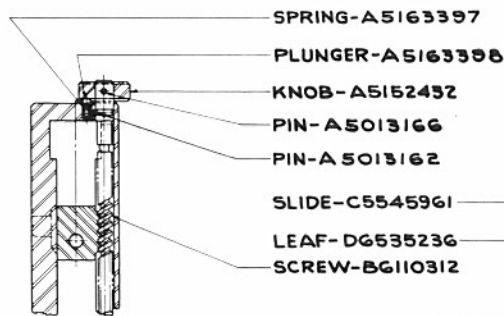
C5545961

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE  
H. H. C. C. C.  
ORD. DEPT. U. S. A.  
ORDNANCE DEPT., U. S. A.  
MADE AT ROCK ISLAND ARSENAL

HEAT TREATMENT AND FINAL FINISH

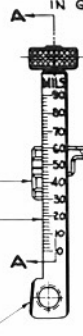
PHYSICAL PROPERTIES		MARCH 10, 1939	
		REVISIONS	
Y. P.		4	5-10-48
T. S.		5	10-21-48
EL. 2		6	11-15-48
RED.			
BR.			
ROCK.			
SCL.			
		DRG. PERTAINS TO	

C5545964 DO B.M.G.  
M 1944 (FAD)  
M 1944 (FLEX)  
M 1946

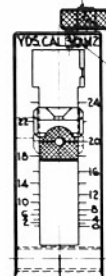
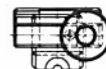


SECTION A-A

HOLE DRILLED IN SCREW FROM KNOB WHEN INDEX LINE ON SLIDE IS ALIGNED WITH MIL GRADUATION 48 AND CLICK IS ENGAGED IN GROOVE OF KNOB.



INSCRIBE PART NUMBER  
1/16" HIGH



.0500 ± .0005

RVET OR STAKE  
PIN ON BOTH ENDS

LEAF, REAR SIGHT, ASSEMBLY

C5545964



WAS C45964

C5545964

DO  
INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL : =  
FRACTIONAL : =  
ANGULAR : =

PREPARED BY H.M.F. *[Signature]* CHECKED BY *[Signature]* DESIGNED BY *[Signature]* FIRST DRAFTSMAN

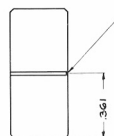
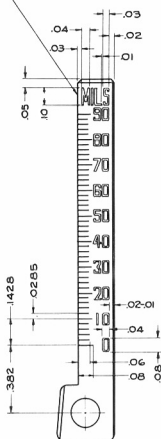
SUBMITTED:

*[Signature]*

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:  
*[Signature]*  
ORD. DEPT. U. S. A.

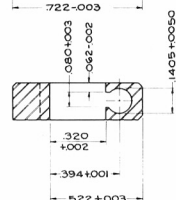
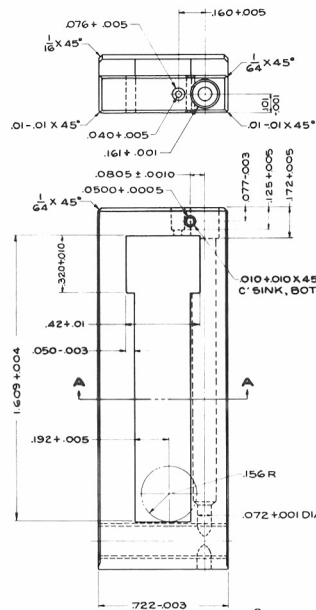
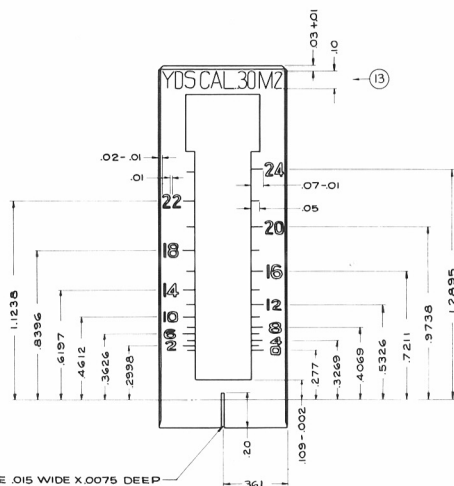
MADE AT ROCK ISLAND ARSENAL

C5545964

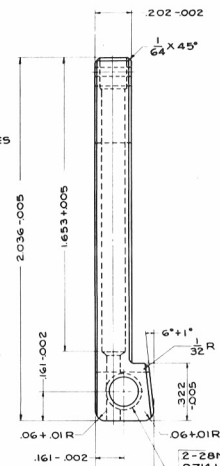


NOTE: SIZE OF FIGURES ON FACE OF LEAF  
1 TO 8 INCLUSIVE .045 X .06 WIDE  
10 TO 12 INCLUSIVE .06 X .06 WIDE  
14 TO 18 INCLUSIVE .08 X .06 WIDE  
20 TO 24 INCLUSIVE .08 X .05 WIDE

DATA USED IN CALCULATIONS	
SIGHT RADIUS.....	13.957
% OF BORE TO TIP OF FRONT SIGHT.....	3.446
% OF BORE TO AXIS OF LEAF JOINT PIN.....	3.169
CONSTANT (SIGHT ABOVE JOINT PIN AXIS).....	.277
GRADUATIONS COMPUTED FROM FIRE CONTROL TABLE	0.30-C-3
PREPARED BY ORDNANCE DEPT DATED APRIL, 1934	
CALCULATIONS FOR GRADUATIONS BASED ON.....	14.285 R



SECTION A-A



2-28N5-3  
0714 LEAD, DOUBLE THREAD  
MAJOR DIA .2000 MIN  
PITCH DIA .1768  $\pm$ .0030  
MINOR DIA .1613  $\pm$ .0039

DO NOT INSCRIBE PART NO.

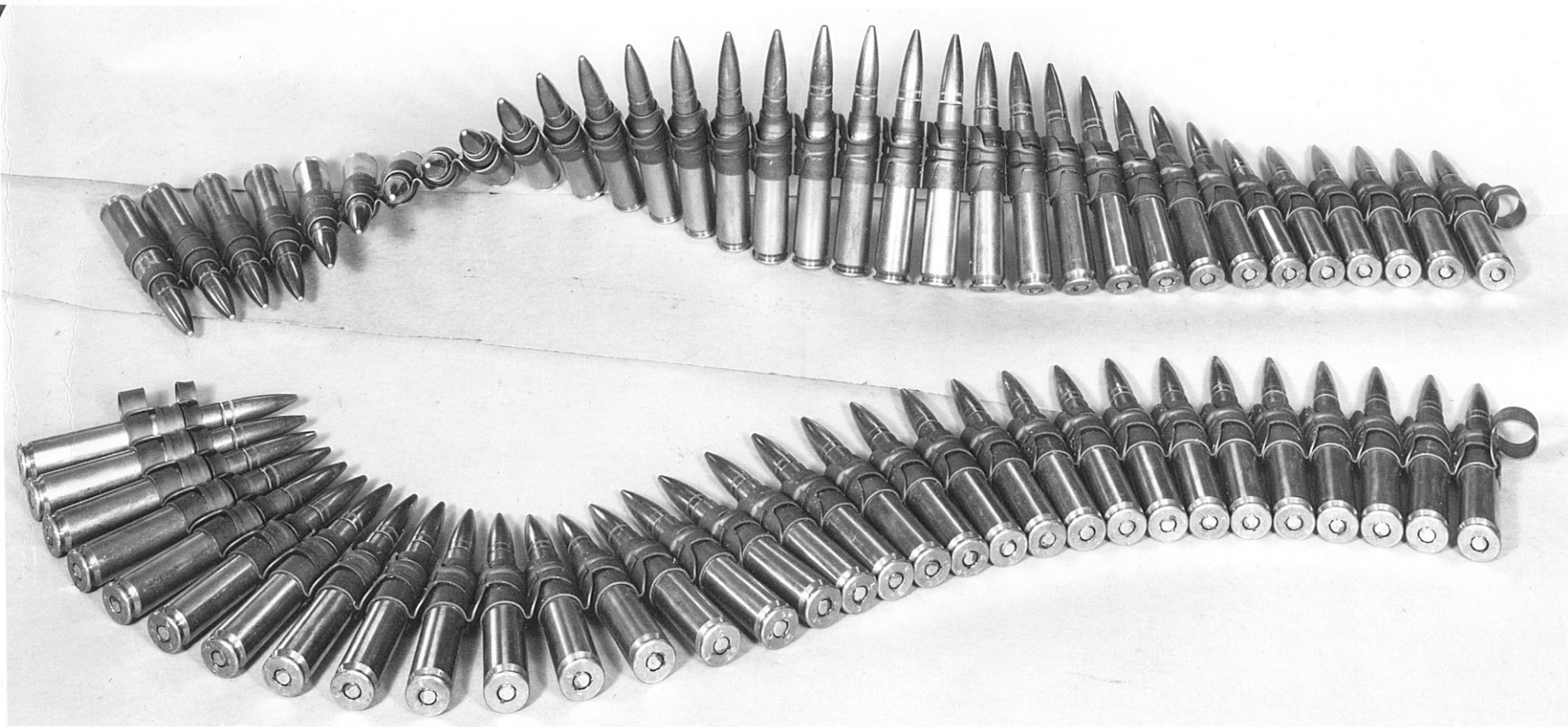
MARCH 10, 1939		CLARK	DIVISION	DRAWING	FILE
REVISONS					
12	5-10-40				
13	10-21-40				
		TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED DECIMAL $\pm .01$ FRACTIONAL $\pm .164$ ANGULAR $\pm .5^\circ$			
		FINISHES			TYPE SHIPMENTS
		C P L	Z C		
		CHANGES			SHIP CHANGES
		1/2" 1/4"	1/2" 1/4"		
DRG. PERTAINS TO		SUBMITTED:			
C5545964	300WBG IN 1184 (FWD) MIRRAA (FLEX) SUSLAK	4/11/40			
		EXAMINED:			
		DRG. DEPT. U.S.A. APPROVED BY ORDER OF THE CHIEF OF BUREAU <i>Water Ackerman</i> DRG. DEPT. U.S.A.			
D 6535236		ORDNANCE DEPT. U.S.A. 1000 ARCADE BUILDING WASHINGTON, D.C.			

WAS D35236

SCALE

D 6535236

ORD. DEPT. U.S.A.  
 APPROVED BY ORDER OF THE CHIEF OF ORDNANCE  
*Walter Ackerman*  
 ORD. DEPT. U.S.A.  
 ORDNANCE DEPT., U.S.A.  
 MADE AT BOSTON, MASS. U.S.A.

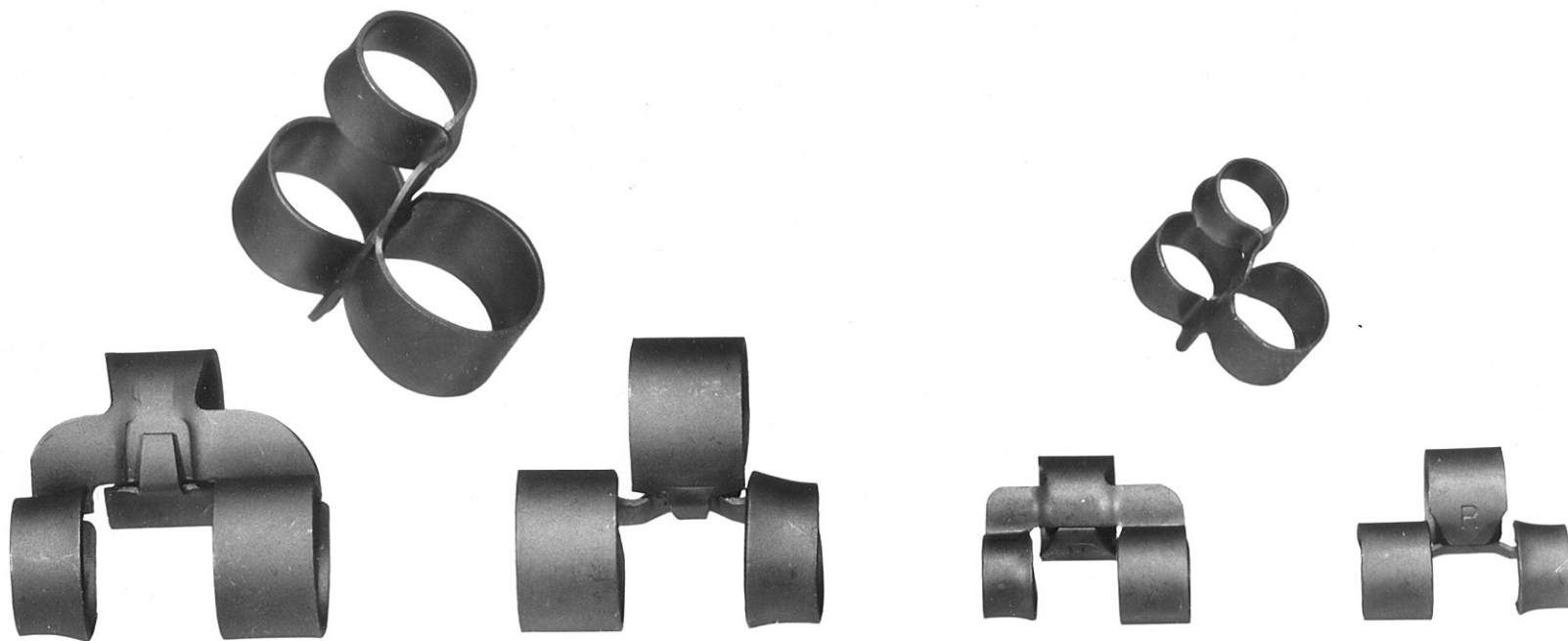


701-43073

ROCK ISLAND ARSENAL ORDNANCE DEPARTMENT

September 29, 1952

Link, Metallic Belt, Cal..50, M9. Flexibility of Assembled Belt.



701-43174

ROCK ISLAND ARSENAL ORDNANCE DEPARTMENT

October 15, 1952

Links, Metallic Belt, Cal..50, M9, Dwg. D7140393 and Cal..30, M1, Dwg. D5559722.







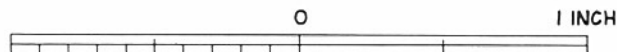
HEAT TREATMENT AND FINAL FINISH

SPRING-A5020615

PIN-A5020562

EDGE OF SLOT TO BE PEENED  
OVER TO RETAIN SPRINGPIN ASSEMBLY

6131253



WAS B131253

B 6131253

PHYSICAL  
PROPERTIESY. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

JUNE 1, 1931

## REVISIONS

8 5-10-48  
9 11-15-49

## DRG. PERTAINS TO

51-10-41	.30 BMG M17A1 (WC)
51-83-1	.30 BMG M19A4 (FXD)
51-84-1	.30 BMG M19A4 (FLEX)
51-114-1	.30 BMG M19A5 (FXD)
51-125-1	.30 BMG M19A6

DO NOT INSCRIBE PART NO.

 TOLERANCE ON DIMENSIONS  
 NOT OTHERWISE SPECIFIED  
 DECIMAL ± —  
 FRACTIONAL ± —  
 ANGULAR ± —

DRAFTSMAN S.C.F.	TRACER L.R.E.	L.D.G. DRAFTSMAN
CHECKER S.C.F.	CHECKER L.R.E.	CHIEF DRAFTSMAN

SUBMITTED:

A.H. ROE

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:-

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

B6131253

ORDNANCE DEPT., U. S. A.

## HEAT TREATMENT &amp; FINAL FINISH

AFTER BENDING HEAT AT 450°-470°F FOR 15 MINUTES

PROTECTIVE FINISH TYPE I CLASS 0.S.C.

## PHYSICAL PROPERTIES

Y.P.

RED.

ROCK.

T.S.

BR.

EL 2

APRIL 4, 1927

## REVISIONS

9	11-5-41	15 <sup>4</sup>	1-9-46
10	7-23-42	16 <sup>2</sup>	4-30-48
11	7-30-42	17 <sup>2</sup>	CONVERSION 11-23-48
12	3-13-43	18 <sup>2</sup>	2-15-49
13	2-7-44		
14	2-10-45		

DO NOT INSCRIBE PART NO.

DRG. PERTAINS TO CONT.

50M.G.-M3 AC. BASIC

ALL .50BMG-M2

## DRG. PERTAINS TO

ALL .30 BMG

51-78-22 USMG-M1

⊕ A5013440 PIN, ACCELERATOR ASM.

⊙ A13440 PIN, BREECH LOCK ASM.

⊕ A5013441 PIN, BELT FEED PAWL ASM.

⊙ A22914 PIN, LOWER GRIP ASM.

⊕ B6131253 PIN, ACCELERATOR ASM.

⊙ B131253 PIN, BREECH LOCK ASM.

⊕ B6131255 PIN, BELT FEED PAWL ASM.

ALL .50 CAL. MG.

B6147762 PIN, COCKING LEVER ASM.

B713145 PIN, COCKING LEVER ASM.

1" SMAN

TRACER

L'G DFTSMAN

F E

Mc

B. P. O.

CHIEF DFTSMAN

M 54

00

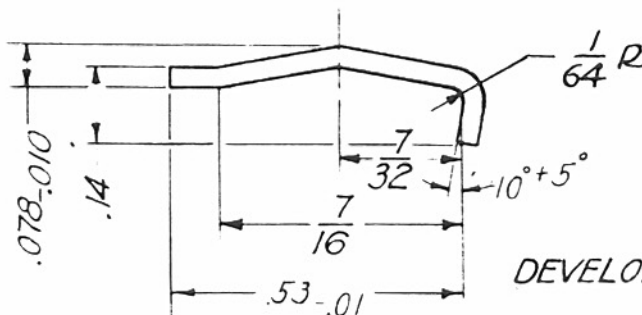
SUBMITTED

LT. COL. ORD DEPT., U. S.

APPROVED BY ORDER OF THE CHIEF OF ORDNANCE.

CAPT. ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



DEVELOPED LENGTH .68-.04

.037 (NO. 16) U.S. GAGE

- ⊕ SPRING, COCKING LEVER PIN
- ⊕ SPRING, ACCELERATOR PIN
- ⊕ SPRING, BELT FEED PAWL PIN
- ⊙ SPRING, BREECH LOCK PIN
- ⊕ SPRING, LOWER GRIP PIN

SPRING STEEL WIRE WD1085 SPECIAL  
U.S.A. SPEC. 48-7-1

TOLERANCE ±.01 ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED.  
SUPERSEDES OLD TRACING A20615  
UNDER REVISION DATE OF NOV. 5, 1941

SCALE 4/1

5020615

A20615-16

A5020615

A20615

A5020615

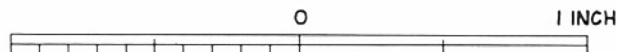
HEAT TREATMENT AND FINAL FINISH

SPRING-A5020615

PIN-A5020562

EDGE OF SLOT TO BE PEENED  
OVER TO RETAIN SPRINGPIN ASSEMBLY

6131253



WAS B131253

B 6131253

PHYSICAL  
PROPERTIESY. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

JUNE 1, 1931

## REVISIONS

8 5-10-48  
9 11-15-49

## DRG. PERTAINS TO

51-10-41	.30 BMG M17A1 (WC)
51-83-1	.30 BMG M19A4 (FXD)
51-84-1	.30 BMG M19A4 (FLEX)
51-114-1	.30 BMG M19A5 (FXD)
51-125-1	.30 BMG M19A6

DO NOT INSCRIBE PART NO.

 TOLERANCE ON DIMENSIONS  
 NOT OTHERWISE SPECIFIED  
 DECIMAL ± —  
 FRACTIONAL ± —  
 ANGULAR ± —

DRAFTSMAN S.C.F.	TRACER L.R.E.	L.D.G. DRAFTSMAN
CHECKER S.H.	C.D.	CHIEF DRAFTSMAN

SUBMITTED:

A.H. ROE

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

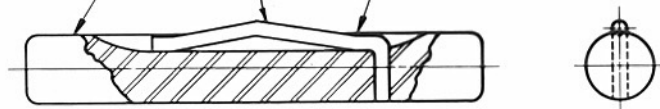
MADE AT ROCK ISLAND ARSENAL

B6131253

HEAT TREATMENT AND FINAL FINISH

SPRING-A5020615  
PIN-A5020491

EDGE OF SLOT TO BE PEENED  
OVER TO RETAIN SPRING



PIN, BELT FEED PAWL, ASSEMBLY

(6131255



WAS B131255

B 6131255

PHYSICAL  
PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

JUNE 1, 1931

REVISIONS

8 5-10-48  
9 11-15-49

DRG. PERTAINS TO

C5509177 .30 BMG  
M17A1 (WC)  
C5564096 .30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

~~DO~~ INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN E. C. P.	TRACER L. R. E.	L. O. G. DRAFTSMAN
CHECKER <i>[Signature]</i>	C. O.	CHIEF DRAFTSMAN

SUBMITTED:

*A. H. Roe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

*Walter R. Korman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

B6131255



HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

A 5020491

APRIL 4, 1927

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

C38-43

REVISIONS

12 5-10-48

DRG. PERTAINS TO

B6131255

30 BMG  
M 17A1 (WC)  
M 19A4 (FXD)  
M 19A4 (FLEX)  
M 19A5 (FXD)  
M 19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm$  —

DRAFTSMAN

M.E.B.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

L.B. [Signature]

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

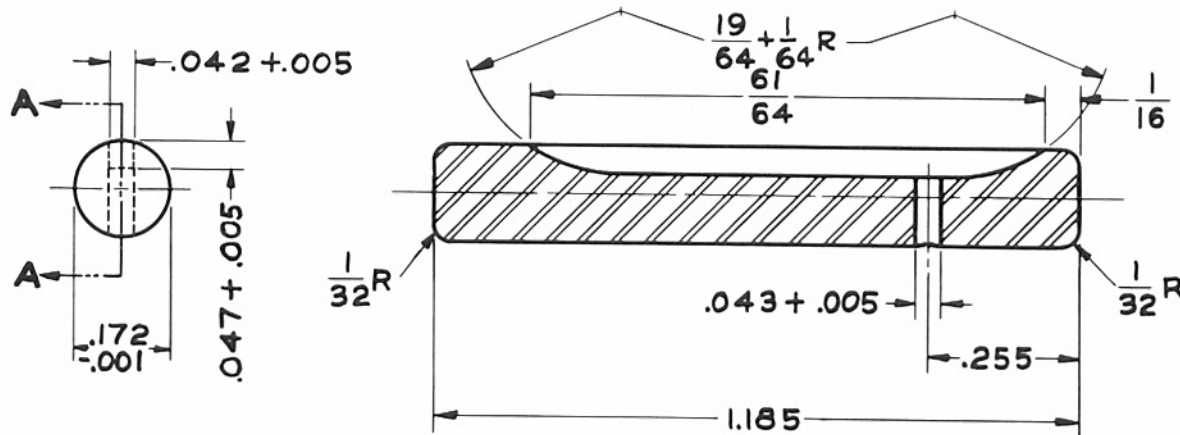
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



SECTION A-A

PIN, BELT FEED PAWL

DRILL ROD  
FINISH 125/

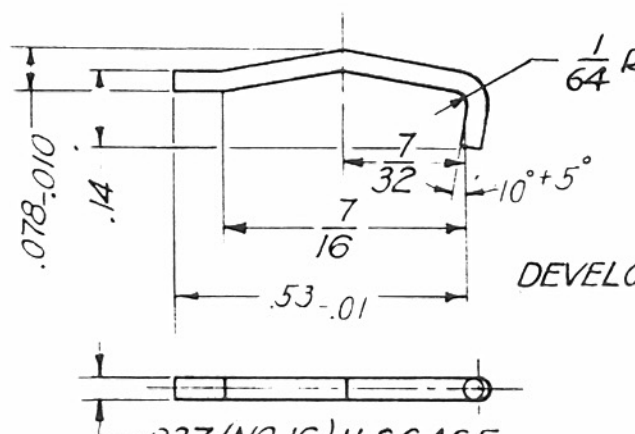
5020491

WAS A20491

SCALE  $\frac{4}{1}$ 

A

5020491

HEAT TREATMENT & FINAL FINISH	PHYSICAL PROPERTIES				APRIL 4, 1927				
AFTER BENDING HEAT AT 450°-470°F FOR 15 MINUTES	Y.P.		RED.		ROCK.	REVISIONS			
	T.S.		BR.			9	11-5-41	15 <sup>4</sup>	1-9-46
	EL 2					10 <sup>1</sup>	7-23-42	16 <sup>2</sup>	4-30-48
PROTECTIVE FINISH TYPE I CLASS 0.S.C.						11 <sup>2</sup>	7-30-42	17 <sup>2</sup> CONVERSION 11-23-48	
						12 <sup>2</sup>	3-13-43	18 <sup>2</sup> 2-15-49	
						13 <sup>1</sup>	2-7-44		
						14 <sup>1</sup>	2-10-45		
	DO NOT INSCRIBE PART NO.					DR'G. PERTAINS TO			
	DR'G. PERTAINS TO CONT.								
	50 MG.-M3 AC. BULK					DR'G. PERTAINS TO			
	ALL .50 BMG-M2								
						ALL .30 BMG			
						51-78 .22 USMG-M1			
						A5013440 PIN, ACCELERATOR ASM.			
						A13440 PIN, BREECH LOCK ASM.			
						A5013441 PIN, BELT FEED PAWL ASM.			
						A22914 PIN, LOWER GRIP ASM.			
						B6131253 PIN, ACCELERATOR ASM.			
						B131253 PIN, BREECH LOCK ASM.			
						B6131255 PIN, BELT FEED PAWL ASM.			
						ALL .50 CAL. MG.			
	B6147762 PIN, COCKING LEVER ASM.								
	B7131745 PIN, COCKING LEVER ASM.								
	1 <sup>ST</sup> MAN TRACER LOG OFFSMAN								
	CHIEF OFFSMAN								
	SUBMITTED								
	LT. COL. ORD DEPT., U. S.								
	APPROVED BY ORDER OF THE CHIEF OF ORDNANCE								
	CAPT. ORD. DEPT., U. S. A.								
	ORDNANCE DEPT., U. S. A.								

- ⊕ SPRING, COCKING LEVER PIN
- ⊕ SPRING, ACCELERATOR PIN
- ⊕ SPRING, BELT FEED PAWL PIN
- ⊕ SPRING, BREECH LOCK PIN
- ⊕ SPRING, LOWER GRIP PIN

SPRING STEEL WIRE WD1085 SPECIAL  
U.S.A. SPEC. 48-7-1

TOLERANCE ±.01 ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED.  
SUPERSEDES OLD TRACING A20615  
UNDER REVISION DATE OF NOV. 5, 1941

SCALE  $\frac{4}{1}$

5020615

A20615-16

A5020615

A20615

SUPERSEDES A 20615

A5020615

HEAT TREATMENT AND FINAL FINISH

SPRING-A5020615  
PIN-A5020491

EDGE OF SLOT TO BE PEENED  
OVER TO RETAIN SPRING



PIN, BELT FEED PAWL, ASSEMBLY

6131255



WAS B131255

B 6131255

# PHYSICAL PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

JUNE 1, 1931

## REVISIONS

8 5-10-48  
9 11-15-49

## DRG. PERTAINS TO

C5509177 .30 BMG  
M17A1 (WC)  
C5564096 .30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

DO INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN E. C. P.	TRACER L. R.	L. O. G. DRAFTSMAN
CHECKER S. H.	C. O.	CHIEF DRAFTSMAN

SUBMITTED:

A. H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter R. R. R.

ORD. DEPT., U. S. A.

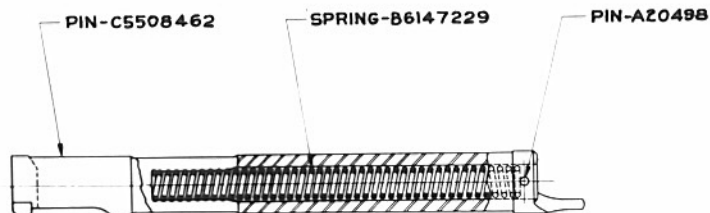
ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

B6131255

### HEAT TREATMENT AND FINAL FINISH

C5509186



5509186

DO NOT INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED		
DECIMAL ± ———		
FRACTIONAL ± ———		
ANGULAR ± ———		
DRAFTSMAN C.S.B.	INCHES L.R.E.	1:5 DRAFTSMAN
CHECKED <i>John</i>	SCALE 1" = 1"	1:10 DRAFTSMAN
SUBMITTED: <i>A.H. Roe</i>		
ORD DEPT. U.S.A.		
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE <i>Walter Aickman</i>		
ORD DEPT. U.S.A.		
ORDNANCE DEPT., U. S. A.		
MADE AT ROCK ISLAND ARSENAL		

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

APRIL 4, 1927

HEAT TREAT

Y.P.

RED.

ROCK.

C44-51

## REVISIONS

T.S.

BR.

9 11-5-41

10 7-23-42

11 9-8-42

12 4-3-45

13 4-30-46

14 1-17-47

PROTECTIVE FINISH TYPE II CLASS A OR B.

B147222 ROD, DRIVING SPRING, ASM

C9186 PIN, FIRING, ASM

## DR'G. PERTAINS TO

ALL 30 BMG.

⊕

51-78 .22 U.S. M.G.-M1

B8721 PIN, FIRING, ASM.

⊕

B131256 ROD, DRIVING SPRING,

ASSEMBLY

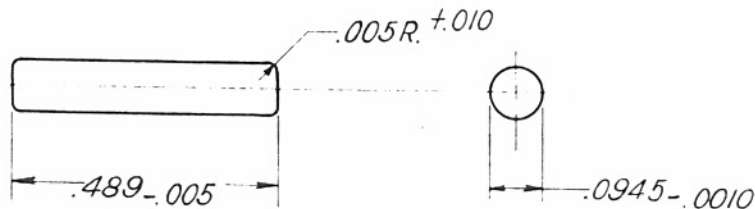
B147556 PIN, FIRING, ASSEMBLY

D35485 TRAINER, CAL. .22,

MACHINE GUN, M3

D35495 TRAINER, CAL. .22,

MACHINE GUN, M4



⊕ PIN, DRIVING SPRING ROD  
PIN, FIRING PIN SPRING

STEEL W.D. 1095  
 FINISH f

(A 20498)

TOLERANCE  $\pm .01$  ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED.  
 SUPERSEDES OLD TRACING A20498  
 UNDER REVISION DATE OF NOV. 5, 1941

SCALE  $\frac{4}{1}$ 

A 20498

DFTSMAN

D.J.P.

TRACER

R. S. B.

L'DG DFTSMAN

G. J. V.

CHECKER

W.B.B.

CHIEF DFTSMAN

J. A. A.

SUBMITTED:

11/11/47  
 LT. COL. ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE  
 CHIEF OF ORDNANCE

CAPT. ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

## HEAT TREATMENT AND FINAL FINISH

DRAW AT 450°F.  
TYPE I FINISH, CLASS OSC  
BAKE ONE HOUR AT 300-350°F.

DIAMETER OF WIRE	_____	.0414
TOTAL NUMBER OF COILS	_____	50.
OUTSIDE DIAMETER, FREE	_____	.259±.003
MAX. OUTSIDE DIA AT MIN OPERATING HEIGHT	_____	.265
FREE LENGTH	_____	4.28±.06
TYPE OF ENDS	_____	SQ & GD
WOUND	_____	R.H.
MEAN ASSEMBLED HEIGHT	_____	2.46
MIN LOAD AT MEAN ASSEMBLED HEIGHT	_____	15.5 LB
MIN OPERATING HEIGHT	_____	2.376
MIN LOAD AT MIN. OPERATING HEIGHT	_____	16.20 LB
LB PER INCH OF SPRING DEFLECTION	_____	8.5
SPRING FUNCTIONS IN HOLE	_____	.270
CALCULATED MAX. SOLID HEIGHT	_____	2.07

CAUTION: DO NOT COMPRESS SOLID

## NOTE:

.5% OF SPRINGS WILL BE FATIGUE TESTED  
BETWEEN ASSEMBLED HEIGHT AND MINIMUM  
OPERATING HEIGHT FOR 50,000 CYCLES. THE  
LOAD AT ASSEMBLED HEIGHT, AFTER TESTING,  
SHOULD NOT BE LESS THAN 14.5 LB

**SPRING FIRING PIN**  
SPRING STEEL WIRE WD1085 SPECIAL - CLASS A

G147229

PHYSICAL  
PROPERTIES

Y. P.	X
T. S.	
EL. 2	
RED	
BR.	
ROCK.	
SCL.	

FEBRUARY 1, 1938

## REVISIONS

NO	DATE	REVISION
10	5-10-48	

## DRG. PERTAINS TO

B 47556	.22 TRAINER
C5500186	30 BMG M17A1(WC) M19A4(FXD) M19A4(FLEX) M19A5(FXD) M19A6

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DESIGNED W.L.M.	TRACED MN	CHECKED G.D.
SUBMITTED A.H. Roe		CHIEF DRAFTER G.D.

ORD. DEPT. - U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:  
Walter Ackerman  
ORD. DEPT. - U. S. A.

ORDNANCE DEPT., U. S. A.

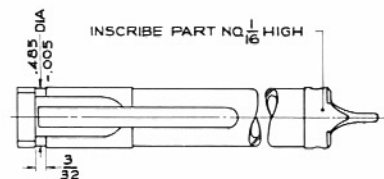
WAS B147229

B G147229

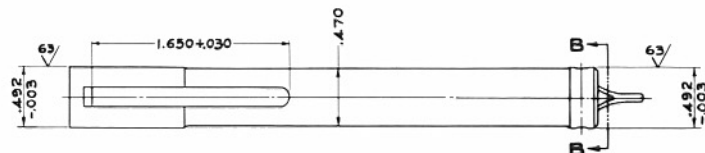
B6147229



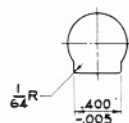
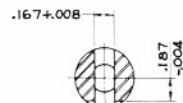
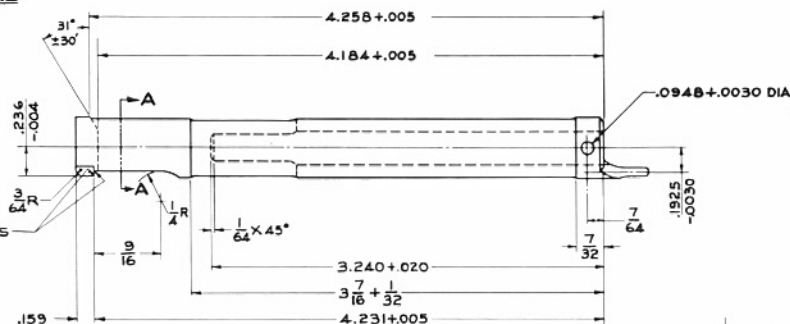
HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS B

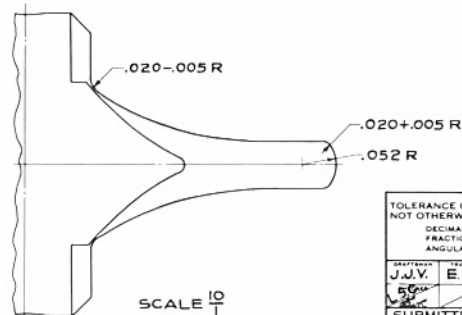
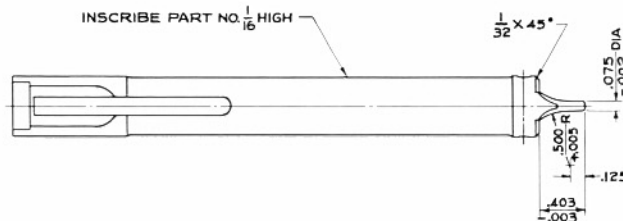
ALTERNATIVE METHOD OF MANUFACTURE



SECTION B-B

SCALE  $\frac{4}{1}$ THESE CORNERS  
TO BE SHARP

SECTION A-A

INSCRIBE PART NO.  $\frac{1}{16}$  HIGHSCALE  $\frac{10}{1}$ PIN, FIRING  
STEEL FS4140  
FINISH 125

5508462

WAS C8462

INSCRIBE PART NO.

SCALE  $\frac{2}{1}$ 

C 5508462

PHYSICAL  
PROPERTIES

Y. P.	235-10-40
T. S.	
EL. 2	
RED	
BR.	
ROCK.	C48-53
SCL.	

JUNE 1, 1931

REVISIONS

DRG. PERTAINS TO

C5509186

30 BMG
M19A1 (WC)
30 BMG
M19A2 (FXD)
30 BMG
M19A4 (FLEX)
30 BMG
M19A5 (FXD)
30 BMG
M19A6

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL: .005  
FRACTIONAL:  $\frac{1}{64}$   
ANGULAR:  $\pm 3^\circ$

DESIGNED BY J.V. E.B.  
CHECKED BY E.B.  
SUBMITTED BY A.H. ROE

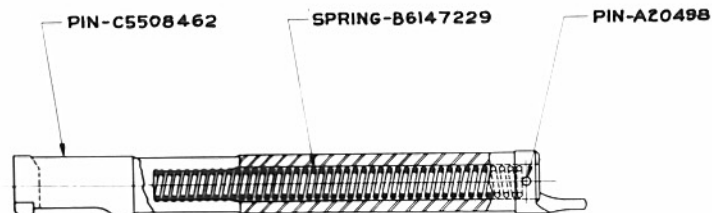
APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE  
Walter C. Bowman  
ORD. DEPT. U. S. A.

MADE AT ROCK ISLAND ARSENAL

C5508462

Diagram illustrating the heat treatment and final finish steps. The process involves heating the material to a temperature range of 1000-1100°F, followed by cooling to 800-900°F, and then cooling to 600-700°F. The final finish is achieved by cooling to 400-500°F.

C5509186

[illegible]

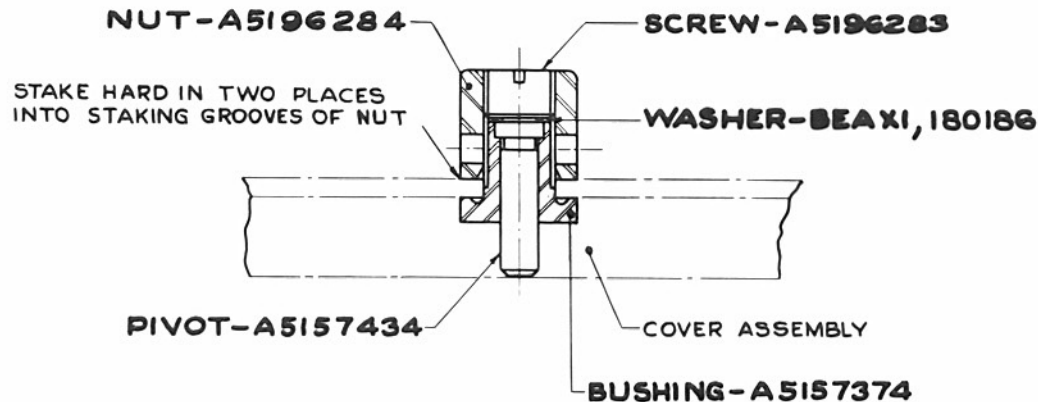
5509186

ORDNANCE DEPT., U. S. A.  
MADE AT ROCK ISLAND ARSENAL

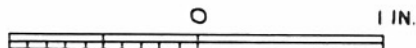
05509186

MADE AT ROCK ISLAND ARSENAL

HEAT TREATMENT AND FINAL FINISH



PIVOT, BELT FEED LEVER, GROUP ASSEMBLY (6110529



PHYSICAL  
PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

JULY 18, 1941

REVISIONS

4 5-10-48

DRG. PERTAINS TO

C5509177

C5564096

.30 BMG  
M17A1 (WC)  
.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL: —  
FRACTIONAL: —  
ANGULAR: —

DRAFTSMAN  
L. SCHMIDT  
CHECKER  
O.K.  
L'D'C DRAFTSMAN  
CHIEF DRAFTSMAN

SUBMITTED:

*A.H. Roe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

*Walter Ackerman*  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

WAS B110529

B 6110529

B6110529

A5157374

SEPT. 30, 1936

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

C. C.

EL. 2

ROCK

.007 TO .010  
DEEP

## REVISIONS

13 5-10-48

## DRG. PERTAINS TO

B6110529

30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

R.J.L.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

L.S.C.

0.0.

CHIEF DRAFTSMAN

SUBMITTED:

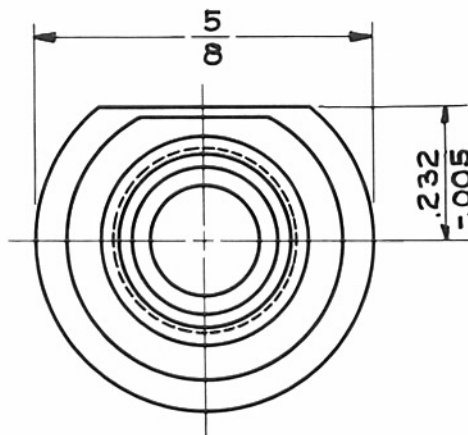
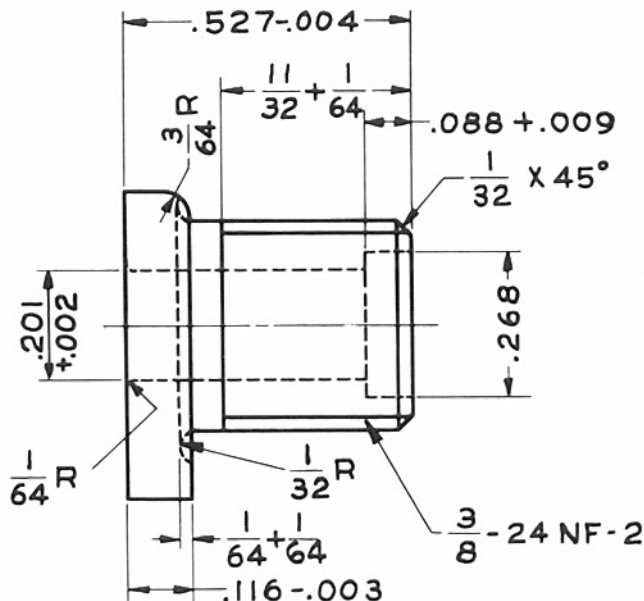
A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**BUSHING, BELT FEED LEVER PIVOT**

STEEL FS X1020

FINISH 125/

5157374

WAS A157374

SCALE 4/1

A

5157374

A 5157434

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

SEPT. 30, 1936

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

C. C.

0.12 TO 0.18  
DEEP

EL. 2

ROCK

## REVISIONS

12 5-10-48

## DRG. PERTAINS TO

B6110529

30 BMG  
M 17A1 (WC)  
M 19A4 (FXD)  
M 19A4 (FLEX)  
M 19A5 (FXD)  
M 19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL  $\pm .005$ FRACTIONAL  $\pm \frac{1}{32}$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

R. J. L.

TRACER

E. R. G.

L'D'G DRAFTSMAN

CHECKER

L. S. G.

CHIEF DRAFTSMAN

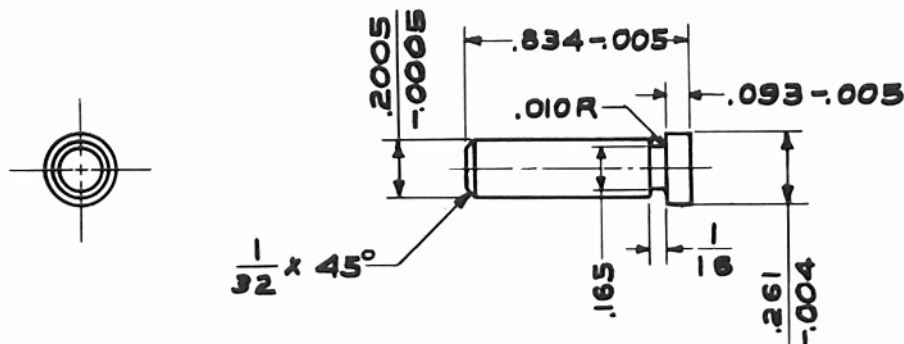
## SUBMITTED:

*A. H. Roe*  
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

*Walter Ackerman*  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



PIVOT, BELT FEED LEVER

STEEL FS3115

FINISH 125/

(5157434)

WAS A157434

SCALE  $\frac{2}{1}$  A 5157434

A5106283

JULY 18, 1941

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

REVISIONS

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL

T. S.

BR.

C. Q.

EL. 2

ROCK

.005 TO .007  
DEEP

9 5-10-48

DRG. PERTAINS TO

B6110529

308M8  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm \frac{1}{32}$ ANGULAR  $\pm 3'$ 

DRAFTSMAN

L.E.S.

TRACER

ERG

L'D'S DRAFTSMAN

CHECKER

H. R. R.

C.O.

CHIEF DRAFTSMAN

SUBMITTED:

A. H. ROE

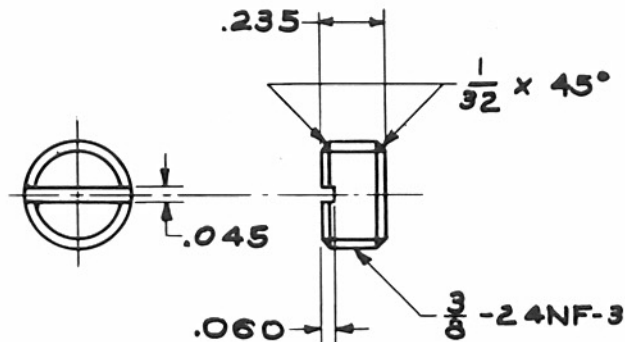
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

SCREW, BELT FEED LEVER PIVOT  
STEEL FSX1315

5196283

WAS A196283

SCALE  $\frac{2}{1}$ 

A

5196283



A5196284

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

JULY 18, 1941

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

C30-35

## REVISIONS

11 5-10-48

## DRG. PERTAINS TO

B6110529

30 BMG  
M17A1 (WC)  
M19A4 (FLEX)  
M19A4 (FXD)  
M19A5 (FXD)  
M19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .010$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

L.E.S.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

J.F. Burk

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

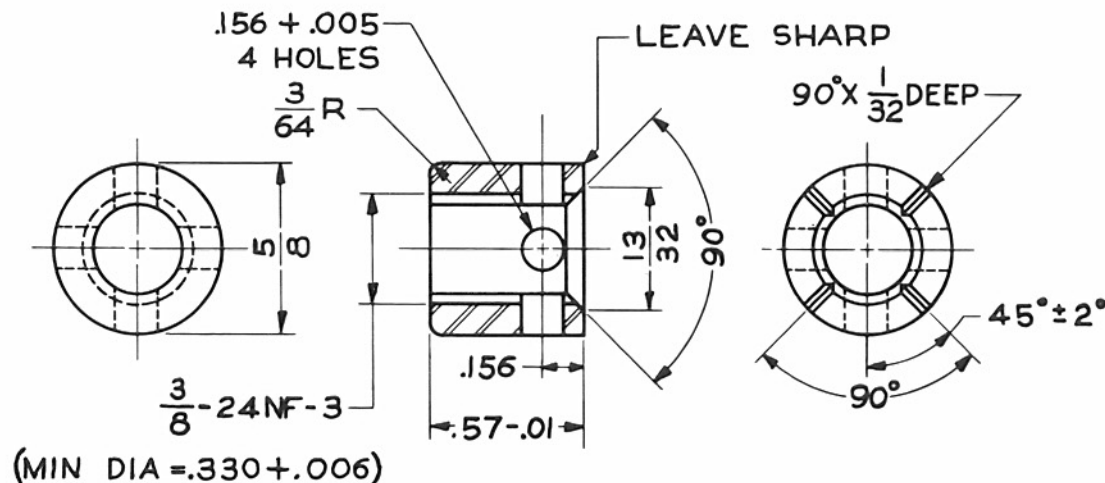
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**NUT, BELT FEED LEVER PIVOT BUSHING**

STEEL FS 1045

FINISH 125/

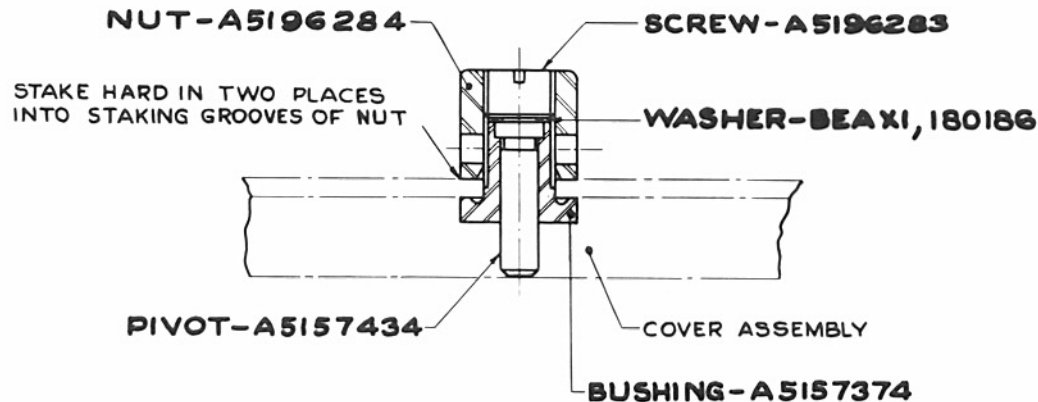
5196284

WAS A196284

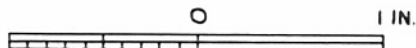
SCALE  $\frac{2}{1}$ 

A 5196284

HEAT TREATMENT AND FINAL FINISH



PIVOT, BELT FEED LEVER, GROUP ASSEMBLY (6110529



PHYSICAL  
PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

JULY 18, 1941

REVISIONS

4 5-10-48

DRG. PERTAINS TO

C5509177

C5564096

.30 BMG  
M17A1 (WC)  
.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL: —  
FRACTIONAL: —  
ANGULAR: —

DRAFTSMAN

L. SCHMIDT

CHECKER

of

TRACER

O.K.

C.D.

L'D'C DRAFTSMAN

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

WAS B110529

B 6110529

B6110529

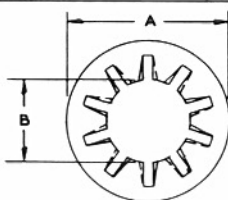
# WASHER, LOCK, "TOOTH" TYPE INTERNAL TOOTH

BEAXI

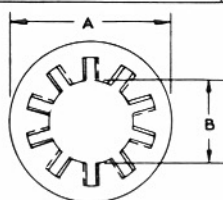
ORDNANCE DEPARTMENT STANDARDS (COMMERCIAL)

WOK  
APPROVED

5-11-33  
DATE



TYPE A



TYPE B

SIZE, NOMINAL		#2	#3	#4	#5	#6	#8
A OUTSIDE DIAMETER	MAX. MIN.	.200 .175	.232 .215	.270 .255	.280 .245	.295 .275	.340 .325
B INSIDE DIAMETER	MAX. MIN.	.095 .069	.109 .102	.123 .115	.136 .129	.150 .141	.176 .168
C THICKNESS	MAX. MIN.	.015 .010	.019 .012	.019 .015	.021 .017	.021 .017	.023 .018

MATERIAL AND FINISH	ORDNANCE PART NUMBER
STEEL PLAIN	190638
STEEL CADMIUM OR ZINC PLATED	188131
STEEL NICKEL PLATED	180088
STEEL CHROMIUM PLATED	180049
STEEL PHOSPHATE COATED	180090
STEEL TIN PLATED	583148
STEEL STAINLESS	221117
PHOSPHOR BRONZE PLAIN	424227
PHOSPHOR BRONZE TINNED	228809
	424219
	116042
	138522
	179162
	180135
	180133
	180154
	138523
	138524
	426743
	431504
	228810
	424220
	180156
	147755
	180184
	180182
	180186
	426679
	583150
	228821
	424221
	115543
	138526
	118924
	138527
	138528
	426636
	583151
	190669
	219891
	115544
	138530
	118925
	138531
	138166
	426351
	583152
	190670
	225843

SIZE, NOMINAL		#10	#12	#14 & 1/4	5/16	3/8	1
A OUTSIDE DIAMETER	MAX. MIN.	.381 .365	.410 .394	.478 .460	.610 .594	.692 .670	
B INSIDE DIAMETER	MAX. MIN.	.204 .195	.231 .221	.267 .256	.332 .320	.398 .384	
C THICKNESS	MAX. MIN.	.025 .020	.025 .020	.028 .023	.034 .028	.040 .032	

MATERIAL AND FINISH	ORDNANCE PART NUMBER
STEEL PLAIN	115545
STEEL CADMIUM OR ZINC PLATED	121801
STEEL NICKEL PLATED	118926
STEEL CHROMIUM PLATED	138533
STEEL PHOSPHATE COATED	130534
STEEL TIN PLATED	225884
STEEL STAINLESS	583153
STEEL LEAD PLATED	221199
STEEL BLACK OXIDE	
PHOSPHOR BRONZE PLAIN	190672
PHOSPHOR BRONZE TINNED	424222
PHOSPHOR BRONZE NICKLE PLATED	
	115546
	125774
	118927
	125775
	138181
	225885
	426865
	225808
	115547
	120423
	118928
	138536
	138167
	225886
	426866
	225809
	502290
	190676
	424225
	115548
	138538
	118929
	138539
	138540
	225887
	583154
	541844
	447127
	502215
	228047
	424226
	213535

## MATERIAL:

STEEL - SAE 1050 OR 1066 HEAT TREATED, ROCKWELL HARDNESS C40 - C50 OR EQUIVALENT.  
PHOSPHOR BRONZE - SPECIFICATION QQ-B-746.

NOTE: FOR SPECIFICATIONS, SEE DRAWING BEAX10.

NOMENCLATURE PATTERN: WASHER, LOCK, TOOTH TYPE, STEEL, 3/8" (PLAIN), DRG. BEAX1, PART NO. 115549.

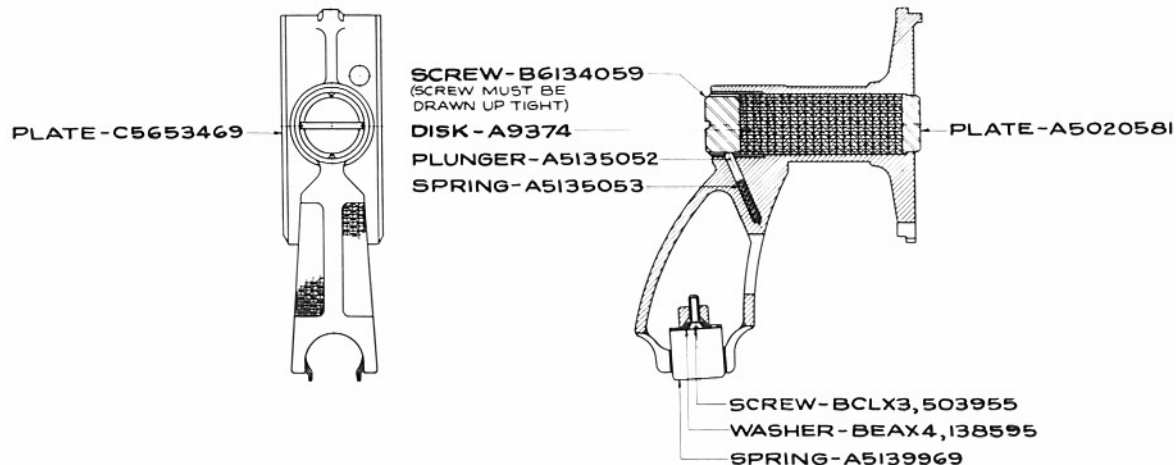
NOTE: EITHER TYPE A OR TYPE B IS ACCEPTABLE.

HEAT TREATMENT AND FINAL FINISH

PHYSICAL PROPERTIES	SEPTEMBER 17, 1943	
	REVISIONS	
Y. P.	6	8-19-48
T. S.		
EL. 2		
RED		
BR		
ROCK		
SCL		

DRG. PERTAINS TO

51-84-1	303M6
51-125-1	M1944 (FLEN)
	303M6
	M1946



PLATE, BACK W/BUFFER, ASSEMBLY

7100059

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL —

FRACTIONAL —

ANGULAR —

DESIGNED BY: R.J.M. Z.C.

1:25 SCALE

1:25 SCALE

SUBMITTED:

Y.H. ROE

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE

Walter Robinson

ORD. DEPT. U. S. A.

MADE AT ROCK ISLAND ARSENAL

SUPERSEDES C7100059 WO/C 8-19-48



DO NOT INSCRIBE PART NO.

C 7100059

C7100059

A 5020581

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

JUNE 1, 1931

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

E. L. 2

ROCK

C43-49

REVISIONS

17 5-10-48

DRG. PERTAINS TO

C5591794 30 BMG  
M17A1 (WC)C5621039 30 BMG  
M19A4 (FXD)  
M19A6 (FXD)C7100059 30 BMG  
M19A4 (FLEX)  
M19A6

DO

INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm$  —  
FRACTIONAL  $\pm$  1/64  
ANGULAR  $\pm$  5°

DRAFTSMAN

W.C.O.

TRACER

A.V.C.

L'D'G DRAFTSMAN

CHECKER

V.S. *W.C.O.*

CHIEF DRAFTSMAN

SUBMITTED:

*A.W. Roe*

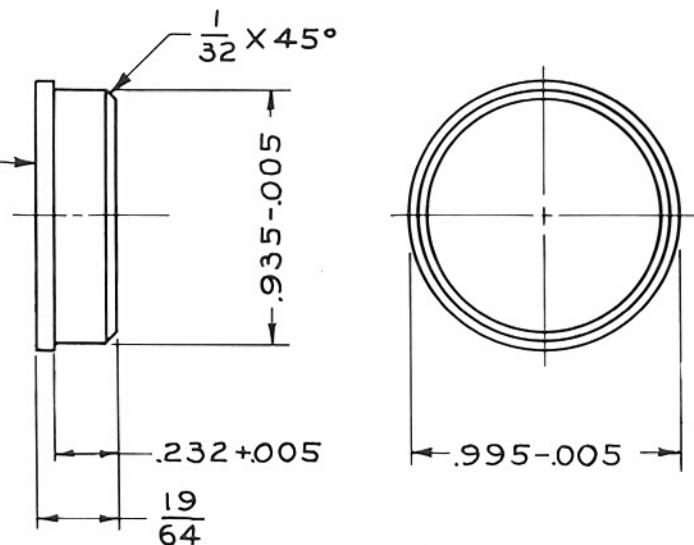
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

INSCRIBE PART NO.

**PLATE, BUFFER**

STEEL FS1045

FINISH 125/

5020581

SCALE  $\frac{2}{1}$ 

WAS A20581

A 5020581

A5139969

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

JUNE 26, 1936

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

A-73-76

REVISIONS

15 8-19-48

DRG. PERTAINS TO

C7100059 .30BMG  
M19A4 (FLEX)  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 2^\circ$ DRAFTSMAN  
E.J.L.TRACER  
O.K.

L'D'G DRAFTSMAN

CHECKER  
C.E.F.  
EWR

CHIEF DRAFTSMAN

SUBMITTED:

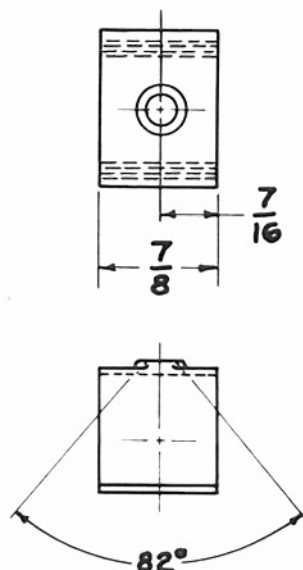
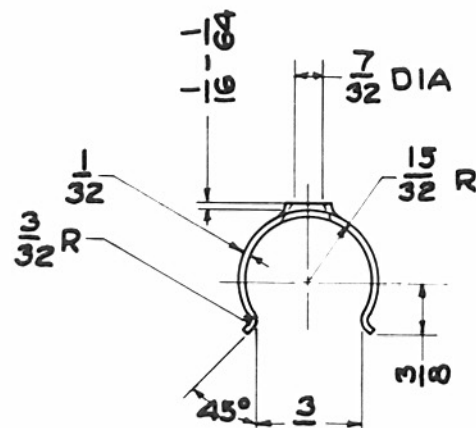
*A.H. Roe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ackman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

CLOSE SPRING TO THIS DIMENSION BEFORE  
HARDENING  
DEVELOPE LENGTH  $2\frac{1}{2}$  IN. APPROXSPRING STOCK  
STEEL WD1095

5139969

WAS A139969

SCALE  $\frac{1}{1}$ 

A 5139969



A5135052

JUNE 1, 1931

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

C.C.

EL. 2

ROCK

.004 TO

.006 DEEP

REVISIONS

17 8-19-48

DRG. PERTAINS TO

C5591794

30 BMG  
M17A1(WC)

C7100059

30 BMG  
M19A4(FLEX)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm$  —FRACTIONAL  $\pm$   $\frac{1}{64}$ ANGULAR  $\pm$  —

DRAFTSMAN

W.C.Q.

TRACER

E.R.G.

L'D'G DRAFTSMAN

CHECKER

P.H.V.

O.O.

CHIEF DRAFTSMAN

SUBMITTED:

A.W. Roe

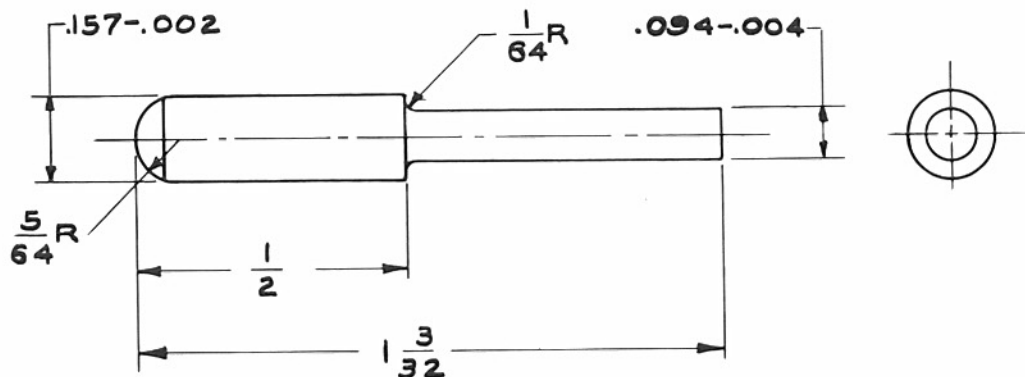
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**PLUNGER, ADJUSTING SCREW**

STEEL FSX1020

FINISH  $\frac{125}{\sqrt{}}$ 

5135052

WAS A135052

SCALE  $\frac{4}{1}$ 

A

5135052

A 5135053

JUNE 1, 1931

## HEAT TREATMENT &amp; FINAL FINISH

DRAW AT 450°F  
TYPE I FINISH, CLASS OSC  
BAKE ONE HOUR AT 300-350°F

## PHYSICAL PROPERTIES

Y. P.		RED.		SCL.	
T. S.		BR.			
EL. 2		ROCK			

## REVISIONS

19	8-19-48		

## DRG. PERTAINS TO

C5591794	.30 BMG M1A1 (WC)
C7100059	.30 BMG M19A4 (FLEX) M19A6

DIAMETER OF WIRE \_\_\_\_\_ .027  
TOTAL NUMBER OF COILS \_\_\_\_\_ 15  
MINIMUM INSIDE DIAMETER, FREE \_\_\_\_\_ .095  
MAX. OUTSIDE DIA AT MIN OPER. HT \_\_\_\_\_ .159  
FREE LENGTH \_\_\_\_\_ .83±.03  
TYPE OF ENDS \_\_\_\_\_ SQUARED & GROUND  
WOUND \_\_\_\_\_ R.H.  
MEAN ASSEMBLED HEIGHT \_\_\_\_\_ .700  
LOAD AT MEAN ASSEMBLED HT \_\_\_\_\_ 3.8LB±.5LB  
MIN OPERATING HEIGHT \_\_\_\_\_ .669  
LOAD AT MIN OPER HT \_\_\_\_\_ 4.7LB±.5LB  
LB PER INCH OF SPRING DEFLECTION \_\_\_\_\_ 29 APPROX  
SPRING FUNCTIONS IN HOLE \_\_\_\_\_ .160  
SPRING FUNCTIONS OVER ROD \_\_\_\_\_ .094  
CALCULATED MAX. SOLID HT \_\_\_\_\_ .450

CAUTION: DO NOT COMPRESS SOLID.

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN W.L.M.	TRACER E.B.	L'D'G DRAFTSMAN
<i>L. H. S. P.</i>	<i>o. o.</i>	CHIEF DRAFTSMAN

SUBMITTED:

*A. H. Roe*

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

*Walter Ackerman*  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

SPRING, ADJUSTING SCREW PLUNGER (5135053)  
SPRING STEEL WIRE  
(WD1085 SPECIAL-CLASS A)

WAS A135053

A 5135053

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

DEC. 1, 1926

Y.P.

RED

SCL

T.S.

BR.

FL. 2

ROCK.

## REVISIONS

12	7-5-39	16	12-20-41
13	10-19-39	17	6-17-42
14	7-1-40	18	7-7-42
15	8-27-41	19	11-2-43
20	1-13-44	21	3-27-44

DRG PERTAINS TO

C7100059 PLATE, BACK,

W/BUFFER, ASM

## DRG. PERTAINS TO

ALL CAL 30BMG

51-78 22USMG-MI.

C64293 PLATE, BACK, SPADE

GRIP, ASSEMBLY

C64294 PLATE, BACK W/HOR.

IZONTAL BUFFER, ASM

B17692 PLATE, BACK, ASM.

C121039 PLATE, BACK

W/BUFFER, ASSEM.

C64010 PLATE, BACK / BUFFER

AND STOCK, ASSEMBLY

C91794 PLATE, BACK W/

BUFFER &amp; STOCK ASSY.

OFFICIALS: *[Signature]* *[Signature]* *[Signature]*

CHIEF: *[Signature]*

SUBMITTED: *[Signature]*

*[Signature]*

MAJOR

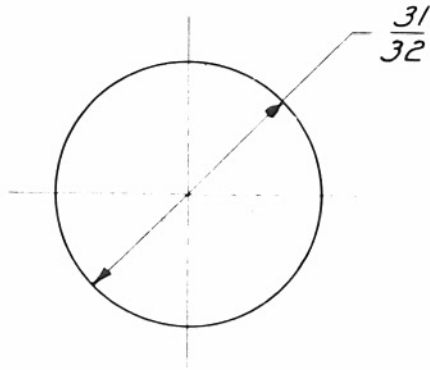
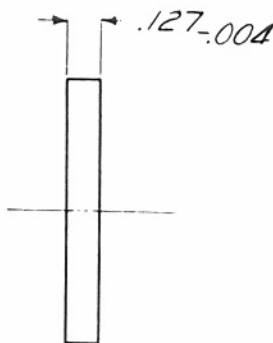
APPROVED BY: *[Signature]* OF THE

CHIEF OF ORDNANCE

*[Signature]*

LT. COL.

ORDNANCE



DISK, BUFFER (A-9374-3)

RED FIBRE

ALL EDGES MUST BE SMOOTH  
AND FREE FROM BURR & TEARS.

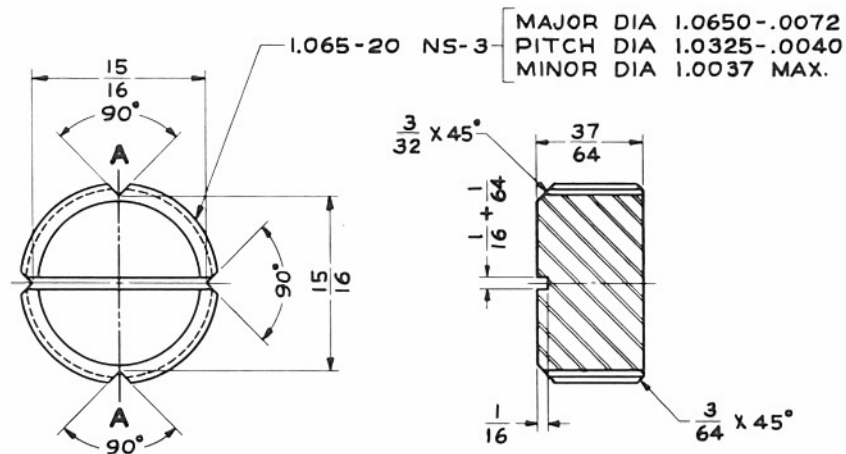
TOLERANCE  $\pm .01$  ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED.

SUPERSEDES OLD TRACING A-9374  
UNDER REVISION DATE OF JULY 5, 1939.

SCALE  $\frac{2}{1}$

A 9374

HEAT TREATMENT AND FINAL FINISH

HEAT TREAT  
TYPE II FINISH, CLASS B**SECTION A-A****SCREW, ADJUSTING**

STEEL FS X1335

FINISH 125/

(6134059

WAS B134059

SCALE  $\frac{2}{1}$  B **6134059**PHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	
SCL.	
C.C.	.004 TO .010 DEEP

JUNE 1, 1931

## REVISIONS

20	B-19-48		

## DRG. PERTAINS TO

C5591794	30 BMG M17A1(WC)
C7100059	30 BMG M19A4(FLEX) M19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± 1/64  
ANGULAR ± 5°

DRAFTSMAN	TRACER	L.O'D DRAFTSMAN
W.C.O.	L.R.E.	
CHECKER		CHIEF DRAFTSMAN

## SUBMITTED:

*A.H. Roe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter A. Anderson*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

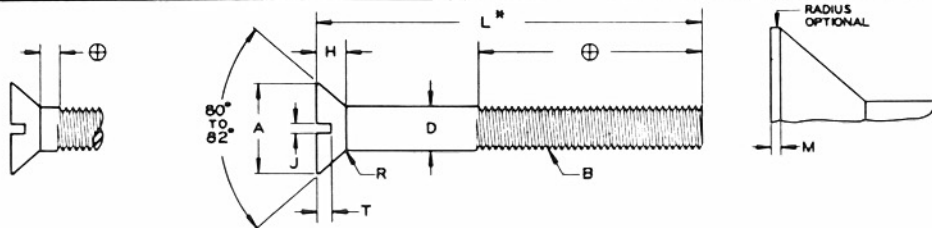
B6134059

# SCREW, MACHINE, FLAT HD. (NF-3) COR. RES. STEEL

BCLX3

ORDNANCE DEPT. STANDARDS (ORDNANCE DESIGN)

APPROVED *Max* 5-15-31  
DATE



NOMINAL SIZE	#0	#1	#2	#5	#8	#10		
B THREADS PER INCH	80	72	64	44	36	32		
D DIAMETER OF BODY	MAX. .0600 MIN. .0502	.0730 .0622	.0860 .0740	.1250 .1079	.1640 .1435	.1900 .1670		
A DIAMETER OF HEAD	SHARP MAX. .119 SHARP MIN. .105 ABS. MIN. .101	.146 .130 .126	.172 .156 .150	.252 .232 .225	.332 .308 .300	.305 .285 .248		
M WIDTH OF FLAT	MAX. .002 MIN. .003	.003 .003	.003 .003	.005 .005	.006 .006	.007 .007		
H HEIGHT OF HEAD	MAX. .035 MIN. .026	.043 .033	.051 .040	.075 .062	.100 .084	.116 .098		
J WIDTH OF SLOT	MAX. .023 MIN. .016	.026 .019	.031 .023	.043 .035	.054 .045	.060 .050		
T DEPTH OF SLOT	MAX. .015 MIN. .010	.019 .012	.023 .015	.034 .022	.045 .029	.053 .034		
R RADIUS	MAX. .025	.027	.031	.045	.055	.062		

L LENGTH	ORDNANCE PART NUMBER - STANDARDS - CORROSION RESISTING STEEL						
1/8		503932	503907				
3/16		503933	503908	544234	503951	544230	
1/4		503934	503909	503945	503952	503961	
5/16		503935	503910	503946	503953	503962	
3/8		503936	503911	503947	503954	503963	
1/2			503912	503948	503955	503964	
5/8				503949	503956	503965	
3/4					503957	503966	
7/8					503958		
1					503959		

L LENGTH	ORDNANCE PART NUMBER - LIMITED STANDARDS - CORROSION RESISTING STEEL						
1/16	503925	503937					
3/32	503926	503938	503943				
1/8	503927						
5/32	503928	503906	503944				
3/16	503929						
7/32				503950			
1/4	503930						
5/16	503931						
7/16				502298		544267	
1/2							
1-1/4					503960	503967	
1-5/16					541920		
1-1/2				582803		503968	

MATERIAL: STEEL, CORROSION RESISTING, GRADE 7A, SPEC. QQ-S-763, LATEST REVISION. DIMENSIONS IN INCHES.

NOMENCLATURE PATTERN: SCREW, MACHINE, FLAT HD., COR. RES. STEEL, #2 - 6ANF-3 x 1/2", DRG. BCLX3, PART NO. 503942.

LENGTH OF THREAD: ON SCREWS 2" LONG OR SHORTER, THREADS SHALL EXTEND TO WITHIN TWO THREADS OF THE BEARING SURFACE OF THE HEAD. LONGER LENGTHS SHALL HAVE A MINIMUM COMPLETE THREAD LENGTH OF 1-3/4".

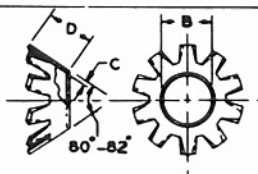
\* TOLERANCE ON LENGTH: UP TO 1" MINUS 1/32; OVER 1" TO 2" MINUS 1/16; OVER 2" MINUS 3/32.

NOTE: PROCURABLE FROM FRANKFORD ARSENAL. THESE SCREWS ARE PRIMARILY FOR INSTRUMENT WORK.

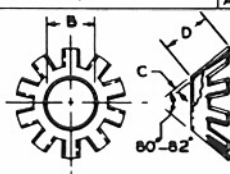
## BEAX4

HHH  
APPROVED

5-11-33  
DATE



**TYPE A**



**TYPE B**

SIZE, NOMINAL		#4	#6	#8	#10	#12	#14 & 1/4
B INSIDE DIAMETER	MAX.	.123	.150	.177	.205	.231	.267
	MIN.	.113	.140	.167	.195	.220	.255
C THICKNESS	MAX.	.019	.021	.021	.025	.025	.025
	MIN.	.015	.017	.017	.020	.020	.020
D SIDE LENGTH	MAX.	.065	.092	.105	.099	.128	.128
	MIN.	.050	.082	.088	.083	.118	.113

MATERIAL	FINISH	ORDNANCE PART NUMBER					
STEEL	PLAIN	114611	114612	114613	114614	114615	114616
STEEL	CADMIUM OR ZINC PLATED	125317	138589	138593	138597	138600	138604
STEEL	NICKEL PLATED	125319	120155	120156	120157	120158	120152
STEEL	CHROMIUM PLATED	125318	138590	138594	129184	138601	138605
STEEL	PHOSPHATE COATED	125320	138591	138595	138598	138602	138606
STEEL	CORROSION RESISTING		431505	431506			

SIZE, NOMINAL		#16	5/16	3/8	7/16	1/2
B INSIDE DIAMETER	MAX.	.287	.333	.398	.463	.529
	MIN.	.273	.318	.383	.448	.512
C THICKNESS	MAX.	.028	.028	.034	.045	.045
	MIN.	.023	.023	.028	.037	.037
D SIDE LENGTH	MAX.	.147	.192	.255	.270	.304
	MIN.	.137	.165	.242	.260	.294

MATERIAL	FINISH	ORDNANCE PART NUMBER				
STEEL	PLAIN	138608	114617	114618	114619	114620
STEEL	CADMIUM OR ZINC PLATED	138609	134512	138617	125823	125829
STEEL	NICKEL PLATED	138611	120159	120160	125825	125831
STEEL	CHROMIUM PLATED	138610	138614	138618	125824	125830
STEEL	PHOSPHATE COATED	138612	138615	138619	125826	125832
STEEL	CORROSION RESISTING		583135			

DIMENSIONS IN INCHES.

NOTE: FOR SPECIFICATIONS, SEE DRAWING BEAX10.

NOMENCLATURE PATTERN: WASHER, LOCK, "TOOTH" TYPE, COUNTERSUNK, 3/8", DRG. BEAX4, PART NO. 114618.

NOTE: EITHER TYPE "A" OR TYPE "B" IS ACCEPTABLE.

ENGINEERING &amp; INSPECTION SECTION - ORRIP

APPROXIMATE DATE OF DEATH

REVISIONS:	⑦	11-8-46	⑧	9-8-49
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HEAT TREATMENT AND FINAL FINISH

C7100059

51-84-1	30 BMG M19A4 (FLEX)
51-125-1	30 BMG M19A6

PLATE, BACK W/BUFFER, ASSEMBLY (7100059)

GRAPHSMAN R.J.M.	TRAILER Z.C.	L.C. GRAPHSMAN
CHIEF <i>[Signature]</i>	<i>[Signature]</i>	CHIEF GRAPHSMAN

411 ROE

ORDNANCE DEPT. U. S. A.

7100059

C 7100059

HEAT TREATMENT AND FINAL FINISH

PHYSICAL  
PROPERTIES

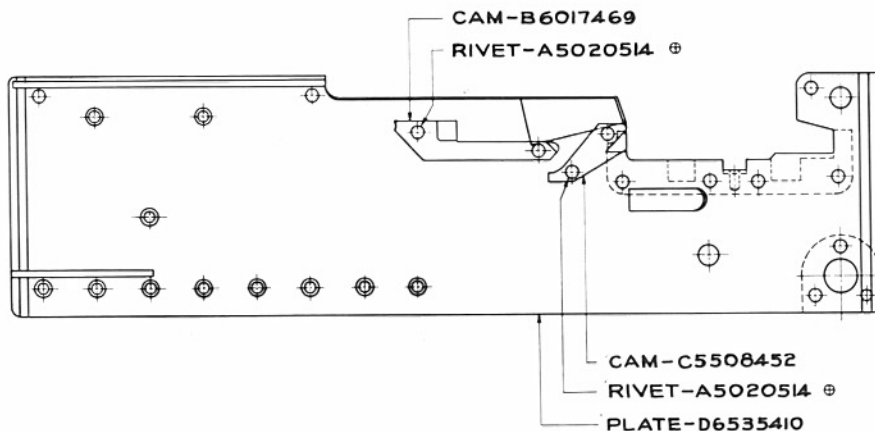
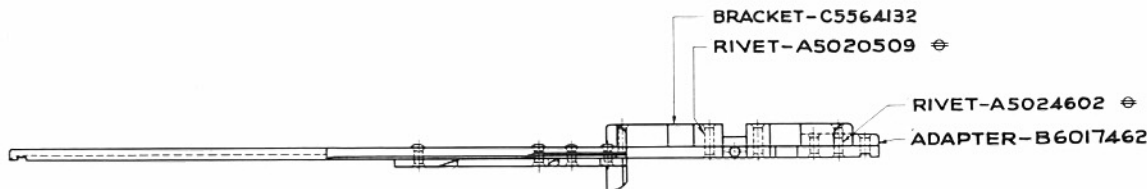
MARCH 10, 1939

REVISIONS

Y. P.	10	5-10-48	
T. S.			
EL. 2			
RED			
BR			
ROCK.			
SCL			

DRG. PERTAINS TO

06535358	30 BMG M19A4(FXD)-FLEX
06540989	30 BMG M19A8(FXD)
07114037	30 BMG M19A6



PLATE, SIDE, L.H., ASSEMBLY

C5564222

NOTE:

- ⊕ GRIND FLUSH INSIDE  
⊕ GRIND FLUSH INSIDE AND OUTSIDE

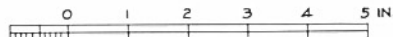
INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL : —  
FRACTIONAL : —  
ANGULAR : —

DESIGNED BY R.S.B.	CHECKED BY E.B.	DATE 10/10/39	BY H.R.
-----------------------	--------------------	------------------	------------

SUBMITTED

H.R.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE.Walter Wickham  
SAS. DEPT. U. S. A.ORDNANCE DEPT., U. S. A.  
MADE AT ROCK ISLAND ARSENAL

WAS C64222

C5564222

C5564222

A 5020509

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

APRIL 4, 1927

REVISIONS

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

11 5-10-48

DRG. PERTAINS TO

C5564185

.30 BMG  
M17A1(WC)

C5564222

.30 BMG  
M19A4(FXD)  
M19A4(FLEX)  
M19A5(FXD)  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm \frac{1}{16}$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

W.C.O.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

L.R.E.

CHIEF DRAFTSMAN

0.0

SUBMITTED:

A.H. Roe

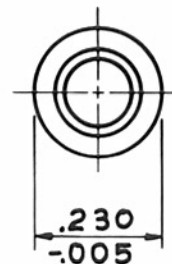
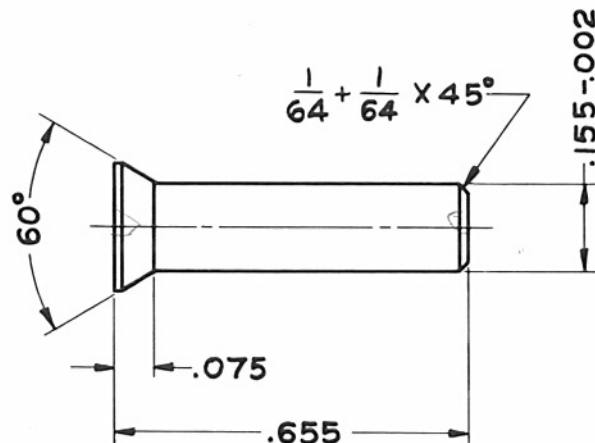
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**RIVET, BELT HOLDING PAWL BRACKET****STEEL FS1035****FINISH 125/**

5020509

WAS A20509

SCALE  $\frac{4}{1}$ 

A

5020509

A 5020514

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

APRIL 4, 1927

## REVISIONS

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

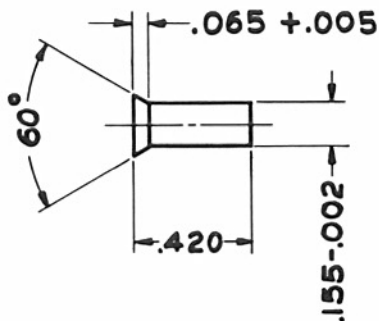
11 5-10-48

## DRG. PERTAINS TO

C5564185

30 BMG  
M17A1 (WC)

C5564222

30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

**RIVET**  
**STEEL FSX1315**  
**FINISH 125/**

5020514

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL  $\pm .005$ FRACTIONAL  $\pm \frac{\quad}{\quad}$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

J.J.V.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

L.E. 125/

O.O.

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Halter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

WAS A20514

SCALE  $\frac{2}{1}$ 

A

5020514

A5024602

JUNE 1, 1931

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

13 5-10-48

DRG. PERTAINS TO

ORDNANCE DIVISIONAL

STANDARD

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\frac{1}{16}$ ANGULAR  $\pm 2^\circ$ 

DRAFTSMAN

TRACER

L'D'G DRAFTSMAN

E.L.F.

E.B.

CHIEF DRAFTSMAN

CHECKED

O.O.

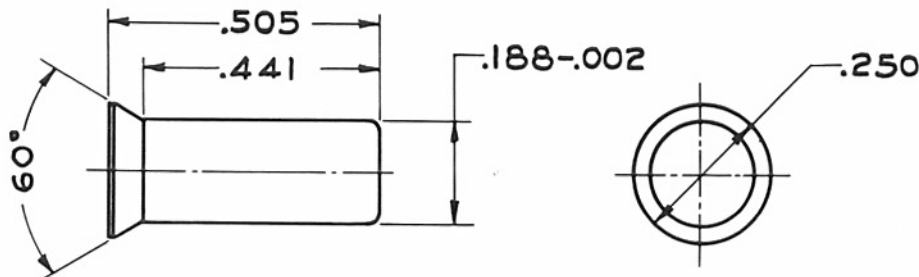
CHIEF DRAFTSMAN

SUBMITTED:

*A.H. Roe*APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter A. Herman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**RIVET, MOUNT ADAPTER****STEEL FS1035****FINISH 125/V**

(5024602)

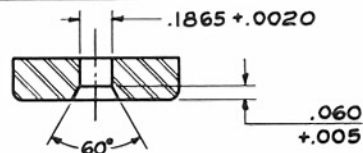
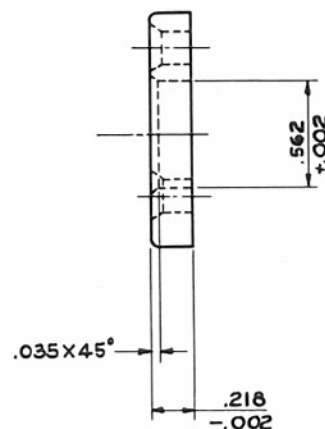
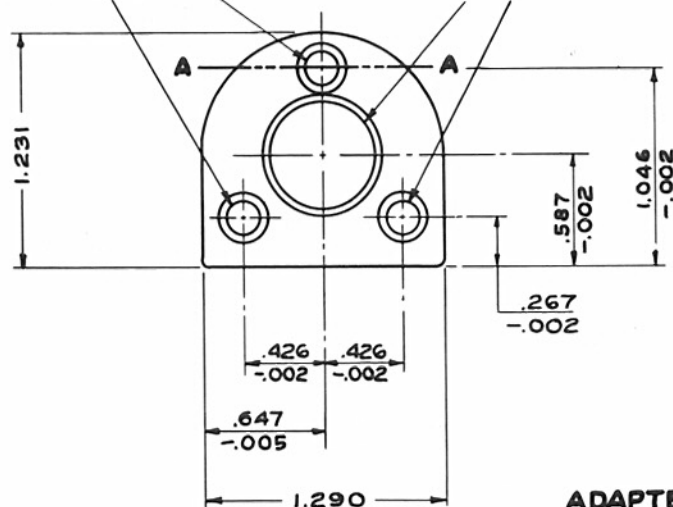
WAS A24602

SCALE  $\frac{4}{1}$ 

A

5024602

HEAT TREATMENT AND FINAL FINISH

**SECTION A-A**REAM AT ASSEMBLY  
WITH R.+L. SIDE PLATESREAM AFTER TRUNNION  
BLOCK IS ASSEMBLED

**ADAPTER, MOUNT**  
STEEL WD 1035  
FINISH 125/

6017462

SCALE  $\frac{2}{1}$ 

WAS B 17462

B 6017462

PHYSICAL  
PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

JUNE 1, 1931

## REVISIONS

15	5-10-48		

## DRG. PERTAINS TO

C5564185	.30 BMG M17A1 (WC)
C5564186	.30 BMG M17A1 (WC)
C5594516	.30 BMG M19A6
C5590722	.30 BMG M19A5 (FXD)
C5564222	.30 BMG M19A4 (FXD) M19A4 (FLEX) M19A5 (FXD) M19A6
C5564224	.30 BMG M19A4 (FXD) M19A4 (FLEX)

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± .005  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN E.S.F.	TRACER O.K.	L.D.G. DRAFTSMAN
CHECKED E.V.H.	APPROVED A.H. ROE	CHIEF DRAFTSMAN

SUBMITTED:

A.H. ROE

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter C. Wickman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

B6017462

# HEAT TREATMENT AND FINAL FINISH

CARBON CASE .010 TO .015 DEEP. ANNEAL  
ONE HALF INCH OF SMALL END.

## PHYSICAL PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	A78-83
SCL.	

JUNE 1, 1931

## REVISIONS

11	5-10-48		

## DRG. PERTAINS TO

C5564185	30 BMG M17A1 (WC)
C5564222	30 BMG M19A4 (FXD) M19A4 (FLEX) M19A5 (FXD) M19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 2^\circ$

DRAFTSMAN	TRACER	L'D'S DRAFTSMAN
C.S.S.	O.K.	
CHECKED		CHIEF DRAFTSMAN
L.S.		

## SUBMITTED:

*A.H. Roe*

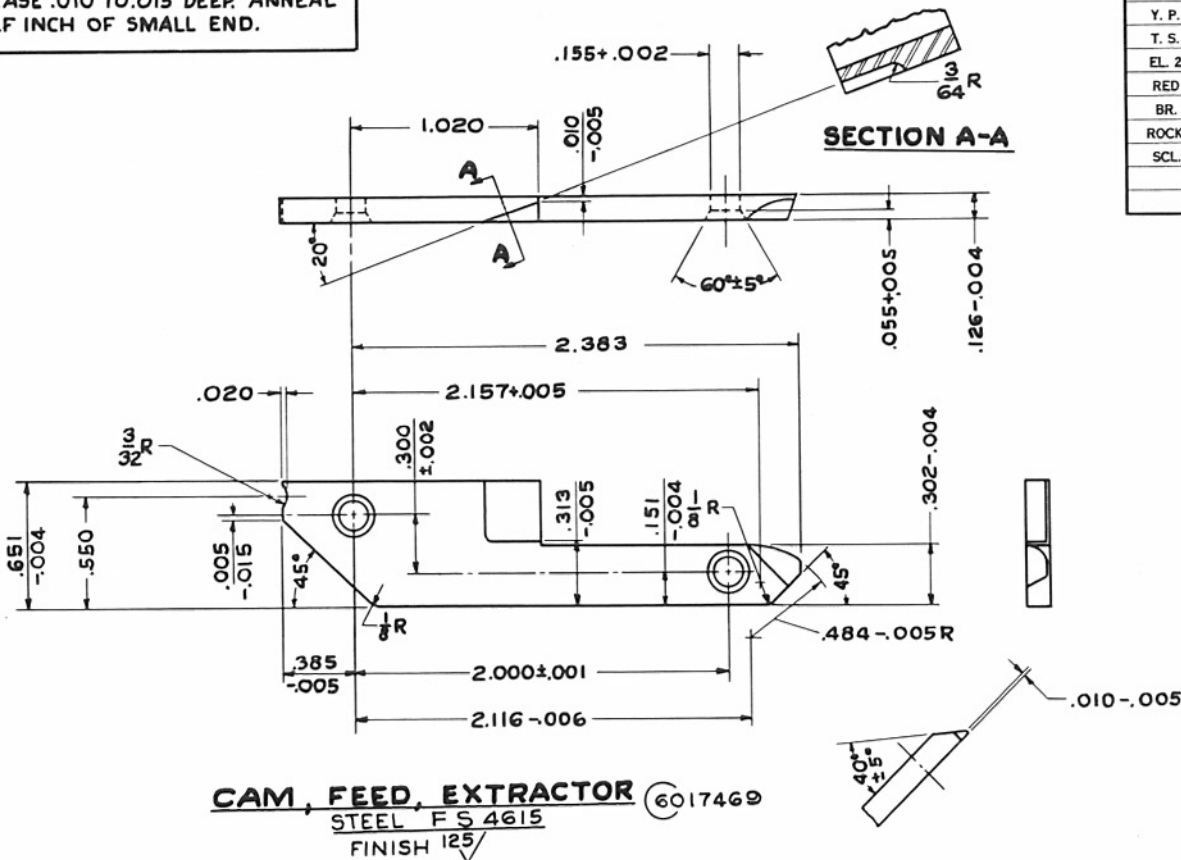
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



**CAM FEED EXTRACTOR** (6017469)

STEEL F S 4615

FINISH 125

WAS B17469

SCALE  $\frac{2}{1}$

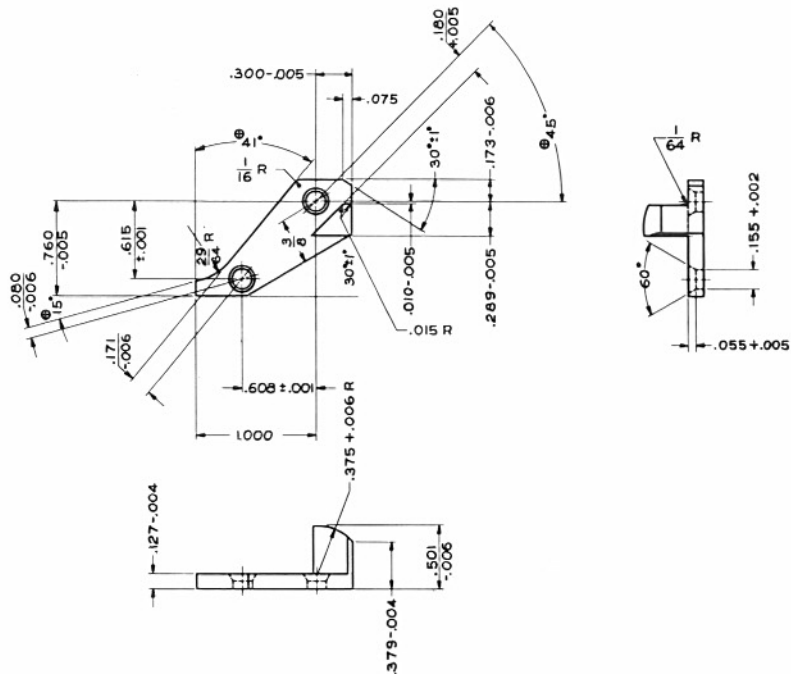
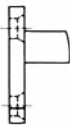
B 6017469

B6017469



## HEAT TREATMENT AND FINAL FINISH

CARBON CASE .010 TO .015 DEEP.  
ANNEAL  $\frac{1}{2}$  INCH OF SMALL END.



**CAM EXTRACTOR**  
STEEL FS 4615  
FINISH 125

5508452

● PERMISSIBLE ANGLE TOLERANCES NOT SPECIFIED, MUST BE WITHIN LIMITS PRESCRIBED BY LOCATING DIMENSIONS.

PHYSICAL PROPERTIES		JUNE 1, 1931	
		REVISIONS	
Y. P.		15	5-10-48
T. S.			
EL. 2			
RED			
BR.			
ROCK.	A78-83		
SCL.			

## DRG. PERTAINS TO

C5564185 30 BMG  
M19A1 (WC)  
C5564222 30 BMG  
M19A4 (FXD)  
30 BMG  
M19A4 (FLEX)  
30 BMG  
M19A5 (FXD)  
30 BMG  
M19A6

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm \frac{1}{64}$   
ANGULAR  $\pm 5^\circ$

DRAWN	TRACED	U.S. INSPECTOR
C.S.S.	L.R.E.	
CHECKED	BY	CHIEF DRAFTSMAN

SUBMITTED

*Handwritten signature*

WAS C8452

DO NOT INSCRIBE PART NO.

SCALE  $\frac{2}{1}$ 

5508452

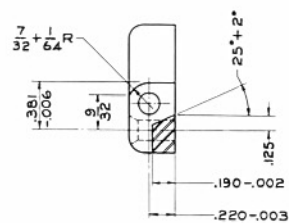
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE  
*Handwritten signature*  
ORDNANCE DEPT., U. S. A.  
MADE AT BOSTON HELD ANDERSON

C5508452

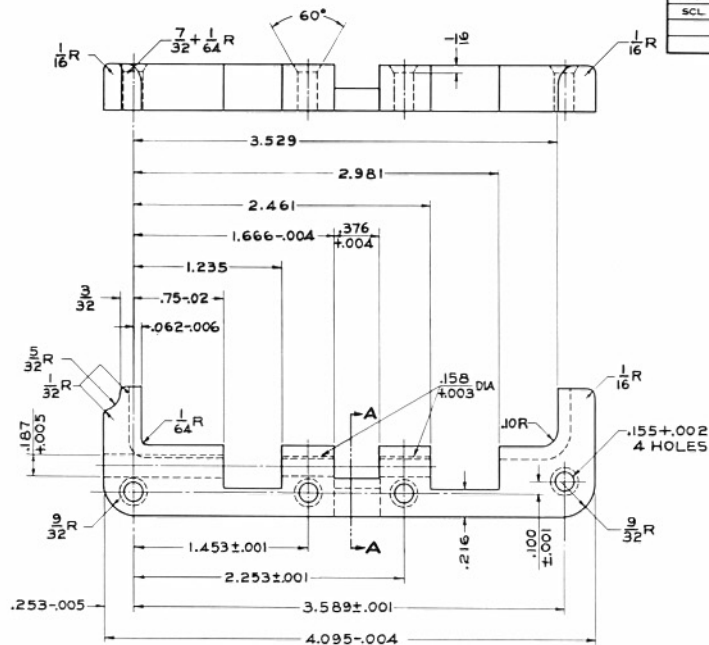
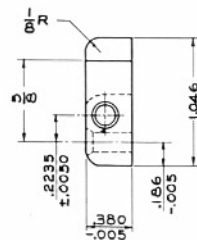
PHYSICAL PROPERTIES		FEBRUARY 1, 1938
		REVISIONS
Y. P.		13 5-10-48
T. S.		
EL. 2		
RED		
BR.		
ROCK.		
SCL.		
		DSC REPAIRING

DRG. PERTAINS TO

C5564185	30 BMG M17A1(WC)
C5564222	30 BMG M19A4(FXD)
	30 BMG M19A4(FLEX)
	30 BMG M19A5(FXD)
	30 BMG M19AG



**SECTION A-A**



BRACKET, BELT HOLDING PAWL

STEEL FSX1020

FINISH 125/

(5564132)

WAS 64132

DO NOT INSCRIBE PART NO.

SCALE  $\frac{2}{1}$ 

C 5564132

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DRAFTSMAN J. J. U.	TRACER E. B.	L. D. DRAFTSMAN
50		CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

APPROVED BY ORDER OF THE CHIEF  
OF GRANCE:

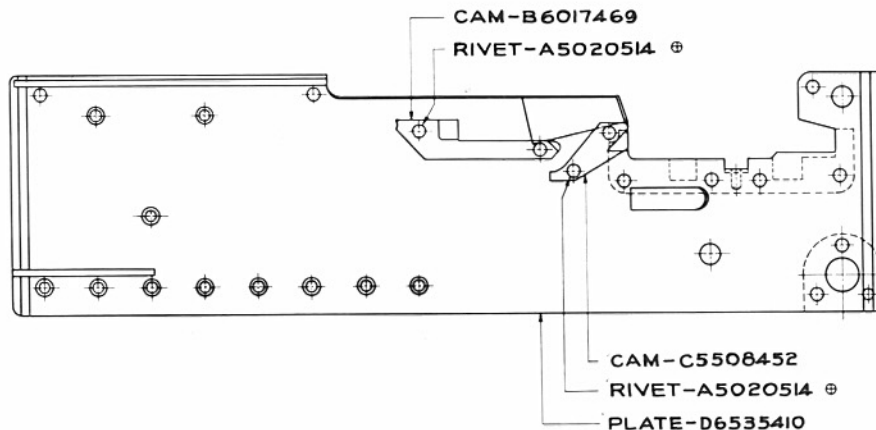
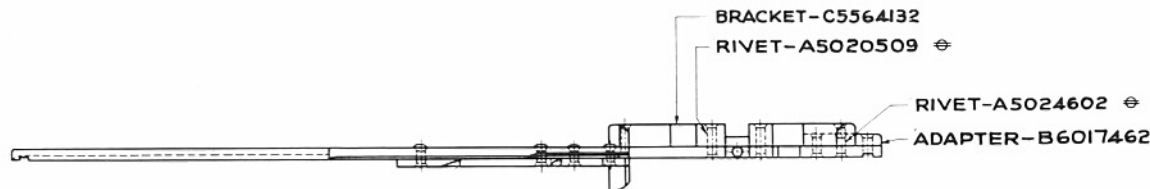
Walter Ackema  
GPO DEPT. U. S.

MADE AT ROCK ISLAND AND AUBURN

HEAT TREATMENT AND FINAL FINISH

PHYSICAL PROPERTIES		MARCH 10, 1939	
		REVISIONS	
Y. P.		10	5-10-48
T. S.			
EL. 2			
RED			
BR			
ROCK			
SCL			
		DRG. PERTAINS TO	

D6535358 30 BMG  
 M1944 (FXD) - FLEO  
 D6540989 30 BMG  
 M1945 (FXD)  
 D7114037 30 BMG  
 M1946



**PLATE, SIDE, L.H., ASSEMBLY**

5564222

NOTE:

- ⊕ GRIND FLUSH INSIDE
- ⊗ GRIND FLUSH INSIDE AND OUTSIDE

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

CRAFTSMAN  
 R.S.B. E.B.  
 CHECKED  
 100% (100% CRAFTSMAN)

SUBMITTED:

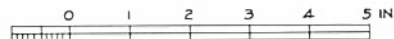
*A.H. Roe*

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE.

*Walter A. Schuman* CHIEF, U.S.A.

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL



WAS C64222

5564222

C5564222

PHYSICAL PROPERTIES	
Y.P.	
T.S.	
EL-2	
RED.	
HT.T.	
BR.	
SCL.	
C.C.	

		DO NOT		INSCRIBE PART NO.	
<div style="border: 1px solid black; height: 40px; width: 100%;"></div>					
FEBRUARY 1, 1935			CLASS	SYSTEM	DRAWING FILE
REVISONS					
10 5-10-40					
			TOLERANCE ON DIMENSIONS NOT OTHERWISE SPECIFIED FRACTIONAL 2 1/64 ANGULAR 5°		
			TEMPERATURE	TEMPERATURE	TEMPERATURE
			100° F	100° F	100° F
			100° F	100° F	100° F
DRG. PERTAINS TO			SUBMITTED		
C5564422			A.H. P.		
30 530E 30 530E (P) 30 530E (P) 30 530E (P)			EXAMINED:		
			APPROVED BY ORDER OF THE U.S. DEPT. OF AGRICULTURE		
			U.S. DEPT. OF AGRICULTURE <i>Walter R. ...</i> U.S. DEPT. OF AGRICULTURE		
D6535410			ORDNANCE DEPT., U.S.A.		
			MADE BY TOOL DESIGN DIVISION		

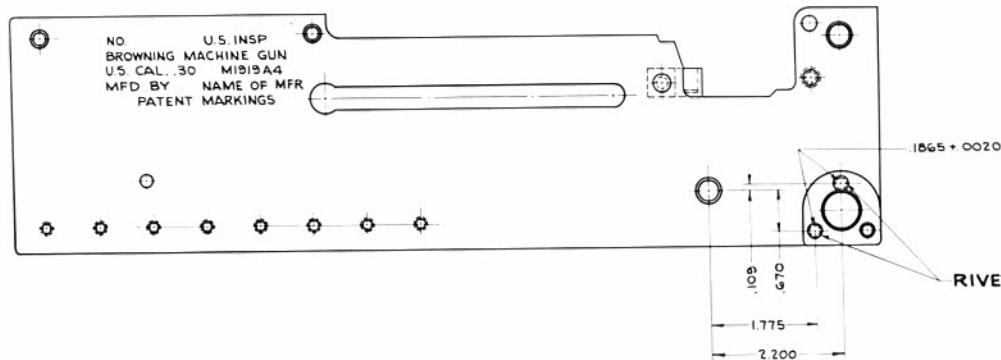
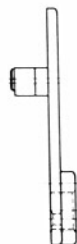
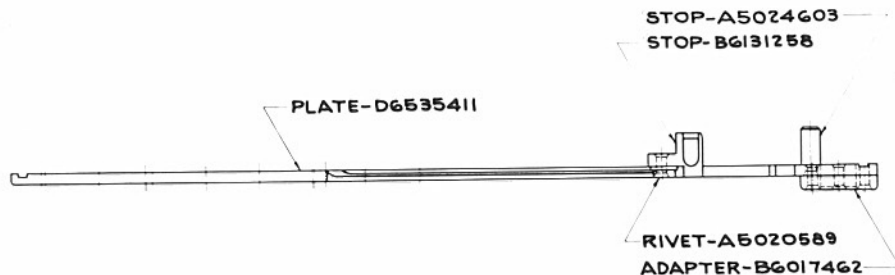
HEAT TREATMENT AND FINAL FINISH

PHYSICAL PROPERTIES		MARCH 10, 1939	
		REVISIONS	
Y. P.		6	5-10-48
T. S.			
EL. 2			
RED			
BR			
ROCK			
SCL			

DRG. PERTAINS TO

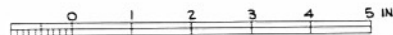
04535358 30 BMS  
M19A4 (2D) (FLE)

C55G4224



PLATE, SIDE, R. H., ASSEMBLY

55G4224

NOTE: GRIND ALL RIVETS FLUSH  
OUTSIDE AND INSIDE.

WAS CG4224

C55G4224

INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL: .001

FRACTIONAL: 1/16

ANGULAR: 1/2

C.F.J. [Signature] T.C. [Signature]

L.C. [Signature] T.C. [Signature]

SUBMITTED: [Signature]

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE: [Signature]

ORD. DEPT. U. S. A.

MADE AT ROCK ISLAND ARSENAL

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

JUNE 1, 1931

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

8 5-10-48

DRG. PERTAINS TO

C5564186

.30 BMG  
M17A1 (WC)

C5564224

.30 BMG 19A4  
(FXD) & (FLEX)

C5590722

.30 BMG  
M19A5 (FXD)

C5594516

.30 BMG  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

M.E.B.

TRACER

L.R.E.

L'D'G DRAFTSMAN

CHECKER

L.S.C.

0.0.

CHIEF DRAFTSMAN

SUBMITTED:

A. H. Roe

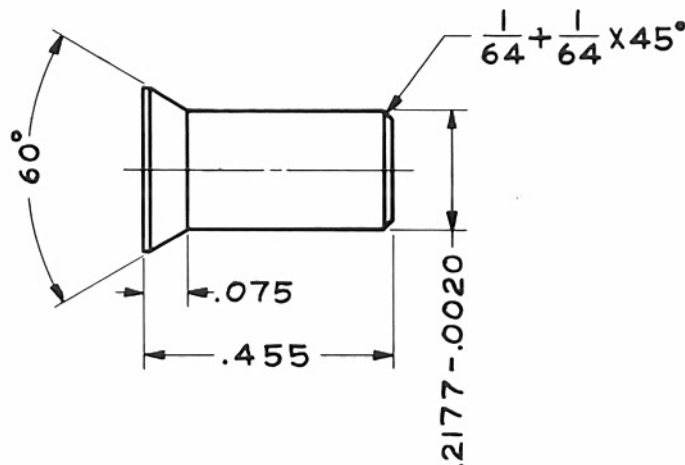
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**RIVET, REAR CARTRIDGE STOP**

STEEL FS1035

FINISH 125/

5020589

WAS A20589

SCALE  $\frac{4}{1}$ 

A

5020589

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

A5024602  
JUNE 1, 1931

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

13 5-10-48

DRG. PERTAINS TO

ORDNANCE DIVISIONAL

STANDARD

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\frac{1}{16}$ ANGULAR  $\pm 2^\circ$ 

DRAFTSMAN

E.L.F.

TRACER

E.B.

L'D'G DRAFTSMAN

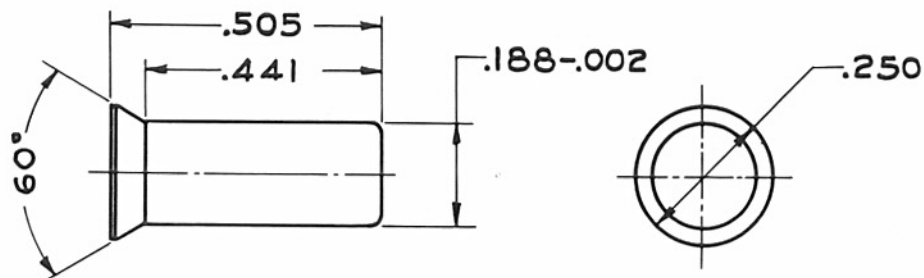
CHIEF DRAFTSMAN

SUBMITTED:

*A.H. Roe*APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter A. Kuman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**RIVET, MOUNT ADAPTER****STEEL FS1035**FINISH  $\frac{1}{25}$  V

5024602

WAS A24602

SCALE  $\frac{4}{1}$ 

A 5024602



JUNE 1, 1931

## REVISIONS

12 5-10-48

## DRG. PERTAINS TO

C5564186

.30 BMG  
M17A1(WC)

C5564224

.30 BMG 19A4  
(FXD) & (FLX)

C5590722

.30 BMG  
M19A5(FXD)

C5594516

.30 BMG  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm \frac{1}{64}$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

W.C.Q.

TRACER

E.R.G.

L'D'G DRAFTSMAN

CHECKER

W.C.Q.

CHIEF DRAFTSMAN

O.O.

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

Y. P.

RED.

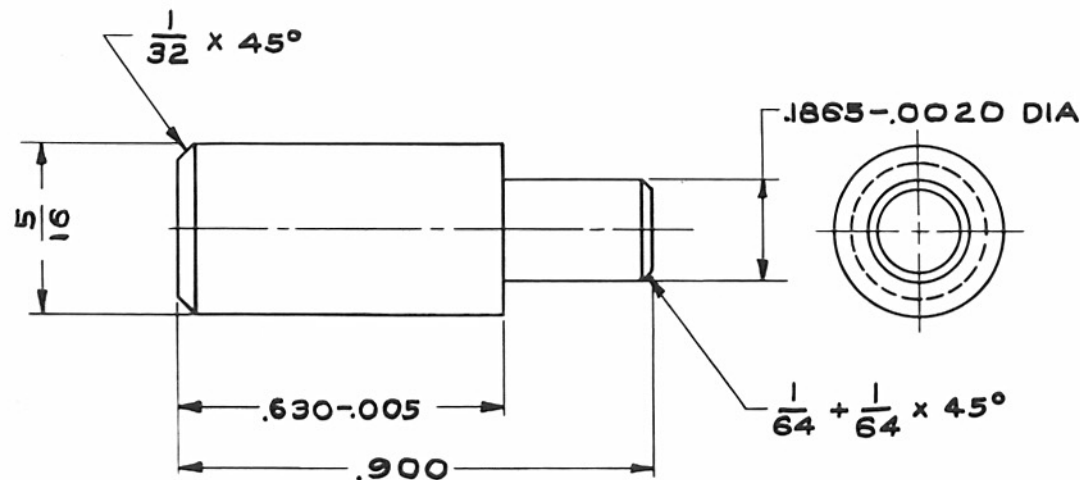
SCL.

T. S.

BR.

EL. 2

ROCK



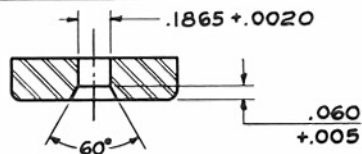
**STOP CARTRIDGE, FRONT** (5024603)  
**STEEL FSX1335**  
 FINISH  $\frac{125}{V}$

WAS A24603

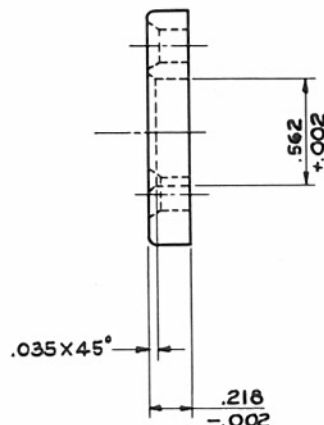
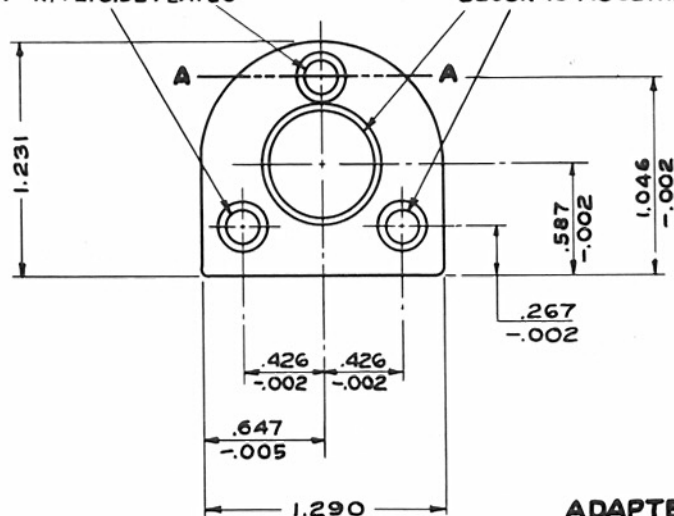
SCALE  $\frac{4}{1}$ 

A 5024603

HEAT TREATMENT AND FINAL FINISH



SECTION A-A

REAM AT ASSEMBLY  
WITH R.+L. SIDE PLATESREAM AFTER TRUNNION  
BLOCK IS ASSEMBLED

**ADAPTER, MOUNT**  
STEEL WD 1035  
FINISH 125/

6017462

SCALE  $\frac{2}{1}$ 

WAS B17462

B 6017462

PHYSICAL  
PROPERTIES

Y. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

JUNE 1, 1931

## REVISIONS

15	5-10-48		

## DRG. PERTAINS TO

C5564185	.30 BMG M17A1 (WC)
C5564186	.30 BMG M17A1 (WC)
C5594516	.30 BMG M19A6
C5590722	.30 BMG M19A5 (FXD)
C5564222	.30 BMG M19A4 (FXD) M19A4 (FLEX) M19A5 (FXD) M19A6
C5564224	.30 BMG M19A4 (FXD) M19A4 (FLEX)

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± .005  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN E. R. J.	TRACER O. K.	L.D.G. DRAFTSMAN
CHECKER L. W. J.	GR.	CHIEF DRAFTSMAN

SUBMITTED:

A. H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter C. Ackerman

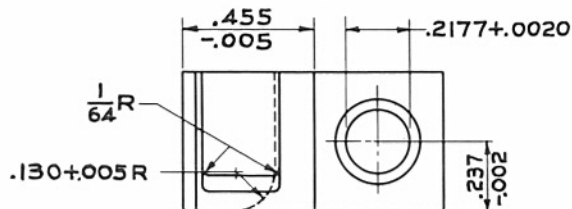
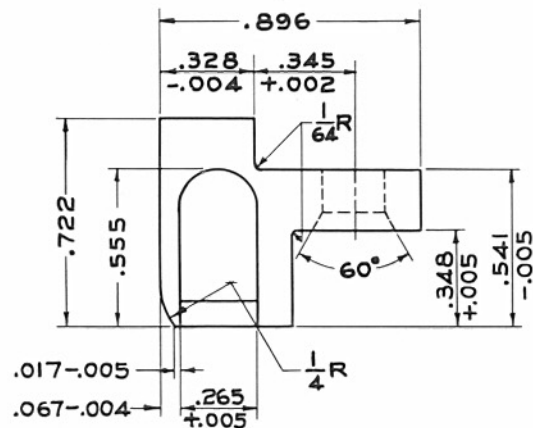
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

B6017462

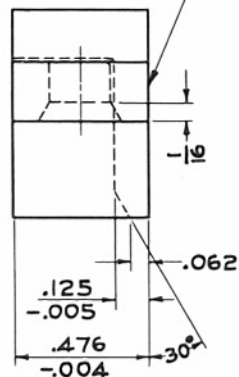
HEAT TREATMENT AND FINAL FINISH

HEAT TREAT



INSCRIBE PART NO.

1/16 HIGH

**STOP, CARTRIDGE, REAR**

STEEL FS3115

FINISH 125

PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED

BR.

ROCK.

SCL.

C34-40

JUNE 1, 1931

REVISIONS

10 5-10-48

DRG. PERTAINS TO

C5564186

30 BMG  
M17A1 (WC)

C5564224

30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)

C5594516

30 BMG  
M19A6

C5590722

30 BMG  
M19A5 (FXD)

DO

INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 5^\circ$

DRAFTSMAN

F.C.L.

TRACER

E.B.

L.D.G. DRAFTSMAN

CHIEF DRAFTSMAN

SUBMITTED:

A.H. ROE

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE.

Walter Ackerman  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

WAS B131258

SCALE 3/1 B

6131258

6131258

B6131258

HEAT TREATMENT AND FINAL FINISH

PHYSICAL PROPERTIES		MARCH 10, 1939	
		REVISIONS	
Y. P.		6	5-10-48
T. S.			
EL. 2			
RED			
BR			
ROCK			
SCL			

DRG. PERTAINS TO

04535358 30 BMS  
M19A4 (230) (FLE)

C5564224

STOP-A5024603  
STOP-B6131258

PLATE-D6635411

RIVET-A6020589  
ADAPTER-B6017462

NO. U.S. INSP  
BROWNING MACHINE GUN  
U.S. CAL. .30 M19A4  
MFD BY NAME OF MFR  
PATENT MARKINGS

.1865 ± .0020

RIVET-A5024602

.103  
.670  
1.775  
2.200

PLATE, SIDE, R. H., ASSEMBLY

5564224

NOTE: GRIND ALL RIVETS FLUSH  
OUTSIDE AND INSIDE.

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL: .001

FRACTIONAL: 1/16

ANGULAR: 1/2

DESIGNED BY C.F.J. CHECKED BY J.H. ROE  
DRAWN BY J.H. ROE

SUBMITTED:

J.H. ROE

APPROVED BY ORDER OF THE CHIEF

OF ORDNANCE:

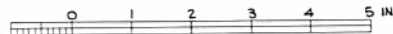
H. H. ROE

ORD. DEPT. U. S. A.

MADE AT ROCK ISLAND ARSENAL

WAS C64224

C5564224





HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B

PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED

BR.

ROCK.

SCL.

JUNE 1, 1931

## REVISIONS

14 5-10-48

## DRG. PERTAINS TO

51-114-1

30 BMG  
M19A5 (FXD)

51-125-1

30 BMG  
M19A6

51-83-1

30 BMG  
M19A4 (FXD)

51-84-1

30 BMG  
M19A4 (FLEX)

51-10-1

30 BMG  
M17A1 (WC)INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ±  
FRACTIONAL ±  
ANGULAR ±DRAFTSMAN  
S.C.F.TRACER  
A.V.C.

L.D.'S DRAFTSMAN

CHECKER

G.D.

CHIEF DRAFTSMAN

SUBMITTED:

A.H. ROE

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

PIN-A5020490

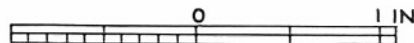
PLUNGER-B6017508

RIVET OVER &amp; FILE FLUSH

PLUNGER, BARREL, ASSEMBLY

FINISH ✓ TO BE 125/ ✓

6131251



WAS B131251

B 6131251

B6131251

A 5020490

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

APRIL 4, 1927

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

10 5-10-48

DRG. PERTAINS TO

B6131251

30 B MG  
 M17A1 (WC)  
 M19A4 (FXD)  
 M19A4 (FLEX)  
 M19A5 (FXD)  
 M19A6

INSCRIBE PART NO.  
 DO NOT

TOLERANCE ON DIMENSIONS  
 NOT OTHERWISE SPECIFIED

DECIMAL  $\pm .005$   
 FRACTIONAL  $\pm 1/64$   
 ANGULAR  $\pm 5^\circ$

DRAFTSMAN  
E.L.J.TRACER  
A.V.C.

L'D'G DRAFTSMAN

CHECKER  
L.S.C.CHIEF DRAFTSMAN  
O.O.

SUBMITTED:

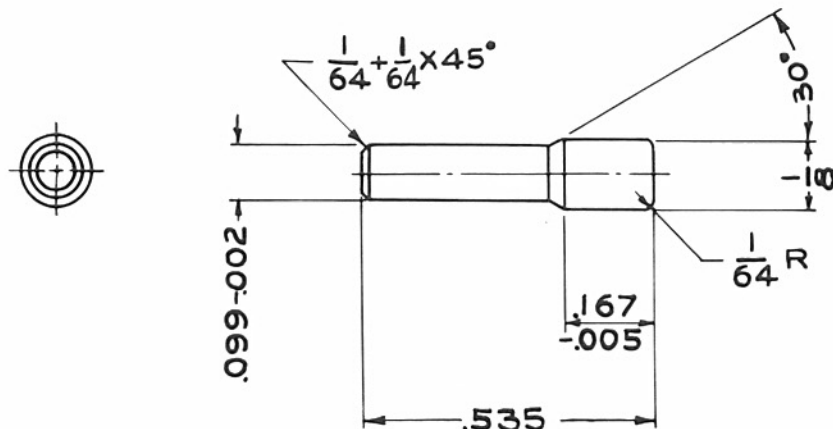
A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
 OF ORDNANCE:

Walter Ackerman  
 ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



PIN, GUIDE, BARREL PLUNGER

STEEL FS1095

FINISH 125/

5020490

SCALE 4/1

WAS A20490

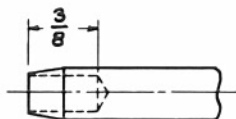
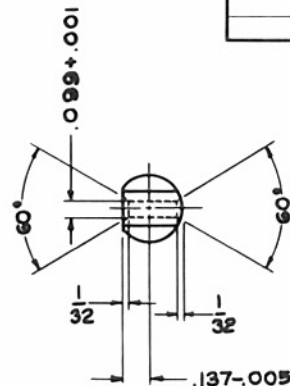
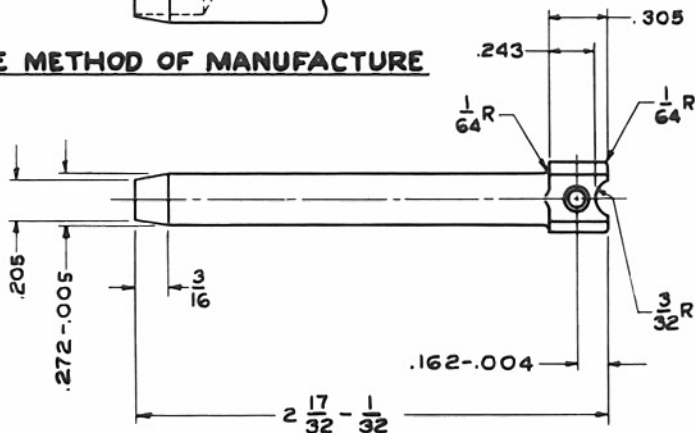
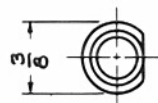
A 5020490



HEAT TREATMENT AND FINAL FINISH

HEAT TREAT

.187+.005

**ALTERNATIVE METHOD OF MANUFACTURE**

**PLUNGER, BARREL** (6017508)  
 STEEL FS 4140  
 FINISH 125/

PHYSICAL  
PROPERTIES

Y. P.	
T. S.	
EL. 2	
RED	
BR.	
ROCK.	C33-39
SCL.	

APRIL 4, 1927

## REVISIONS

13	5-10-48		

## DRG. PERTAINS TO

86131251 .30 BMG  
 M17A1  
 M19A4 (FXD)  
 M19A4 (FLEX)  
 M19A5 (FXD)  
 M19A6

## INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
 NOT OTHERWISE SPECIFIED  
 DECIMAL  $\pm .005$   
 FRACTIONAL  $\pm 1/64$   
 ANGULAR  $\pm 5^\circ$

CHAFFMAN	VERDER	L.V. CHAFFMAN
W.C.Q.	O.K.	
CHIEF		CHIEF DRAFTSMAN

## SUBMITTED:

*A.H. Roe*  
 ORD. DEPT. - U. S. A.

APPROVED BY ORDER OF THE CHIEF  
 OF ORDNANCE-

*Walter A. ...*  
 ORD. DEPT. - U. S. A.

ORDNANCE DEPT., U. S. A.

WAS B 17508

SCALE  $\frac{2}{1}$ 

B 6017508

B6017508

HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B

PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED

BR.

ROCK.

SCL.

JUNE 1, 1931

## REVISIONS

14 5-10-48

## DRG. PERTAINS TO

51-114-1

30 BMG  
M19A5 (FXD)

51-125-1

30 BMG  
M19A6

51-83-1

30 BMG  
M19A4 (FXD)

51-84-1

30 BMG  
M19A4 (FLEX)

51-10-1

30 BMG  
M17A1 (WC)INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ±  
FRACTIONAL ±  
ANGULAR ±DRAFTSMAN  
S.C.F.TRACER  
A.V.C.

L.D.'S DRAFTSMAN

CHECKER  
S.C.F.

D.D.

CHIEF DRAFTSMAN

SUBMITTED:

A.H. ROE

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

PIN-A5020490

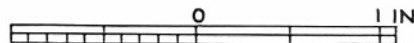
PLUNGER-B6017508

RIVET OVER &amp; FILE FLUSH

PLUNGER, BARREL, ASSEMBLY

FINISH ✓ TO BE 125/ ✓

6131251



WAS B131251

B 6131251

B6131251

HEAT TREATMENT AND FINAL FINISH

PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED

BR.

ROCK.

SCL.

MAY 16, 1946

REVISIONS

2 5-10-48

DRG. PERTAINS TO

B7132923

.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN

O.K.

TRACER

O.K.

L.D.D. DRAFTSMAN

CHECKER

O.K.

D.D.

O.K.

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

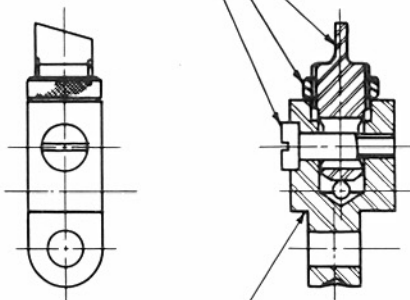
ORDNANCE DEPT., U. S. A.

SCREW-A7162633

NUT-A7162631

BLADE - A7162630

POST-A7162632



POST, FRONT SIGHT, ASSEMBLY (7162616

SUPERSEDES B7162616 WO/C 5-10-48

0

1 IN.

B

7162616

B7162616

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL 2

ROCK

A 7162630

MAY 16, 1946

REVISIONS

I 5-10-48

DRG. PERTAINS TO

B7162616

.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm 3^\circ$ 

DRAFTSMAN

TRACER

L'D'G DRAFTSMAN

CHECKER

O.K.

CHIEF DRAFTSMAN

EWR

O.K.

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

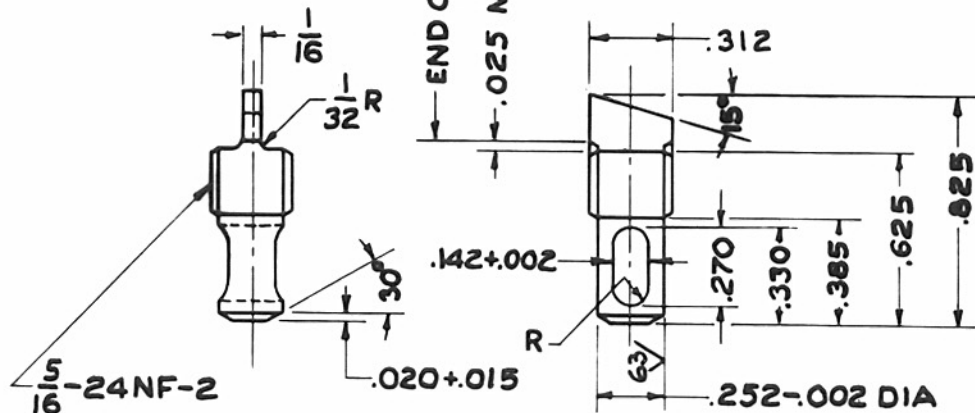
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

END OF THREAD  
.025 MAX.

BLADE, FRONT SIGHT

STEEL FSX 1020

(7162630)

FINISH  $\frac{125}{V}$ , OTHER SURFACES, AS SPECIFIED

SUPERSEDES A7162630 WO/C 5-10-48

SCALE  $\frac{2}{1}$ 

A

7162630

A7162631

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

MAY 16, 1946

TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

E. L. 2

ROCK

REVISIONS

1 5-10-48

DRG. PERTAINS TO

B7162616 .30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19AG

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL  $\pm .005$ FRACTIONAL  $\pm$ ANGULAR  $\pm 3^\circ$ 

DRAFTSMAN

TRACER

L'D'G DRAFTSMAN

CHECKER

O.K.

CHIEF DRAFTSMAN

E.W.H.

0.0

CHIEF DRAFTSMAN

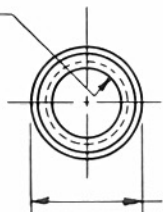
SUBMITTED:

*A.H. Roe*  
ORD. DEPT., U. S. A.

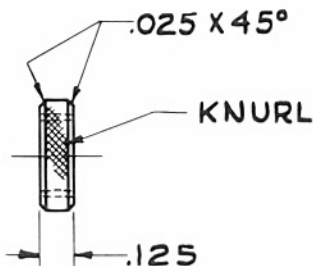
APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE

*Walter Ackerman*  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

 $\frac{5}{16}$  -24 NF -2

.410



.025 X 45°

KNURL

.125

NUT, ADJUSTING, FRONT SIGHT BLADESTEEL FS 1020FINISH 125

⑦162631

SUPERSEDES A7162631 WO/C 5-10-48

SCALE  $\frac{2}{1}$ 

A7162631

A7162632

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

MAY 16, 1946

TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

1 5-10-48

DRG. PERTAINS TO

B 7162616

30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm 3^\circ$ 

DRAFTSMAN

TRACER

L'D'G DRAFTSMAN

CHECKER

CHIEF DRAFTSMAN

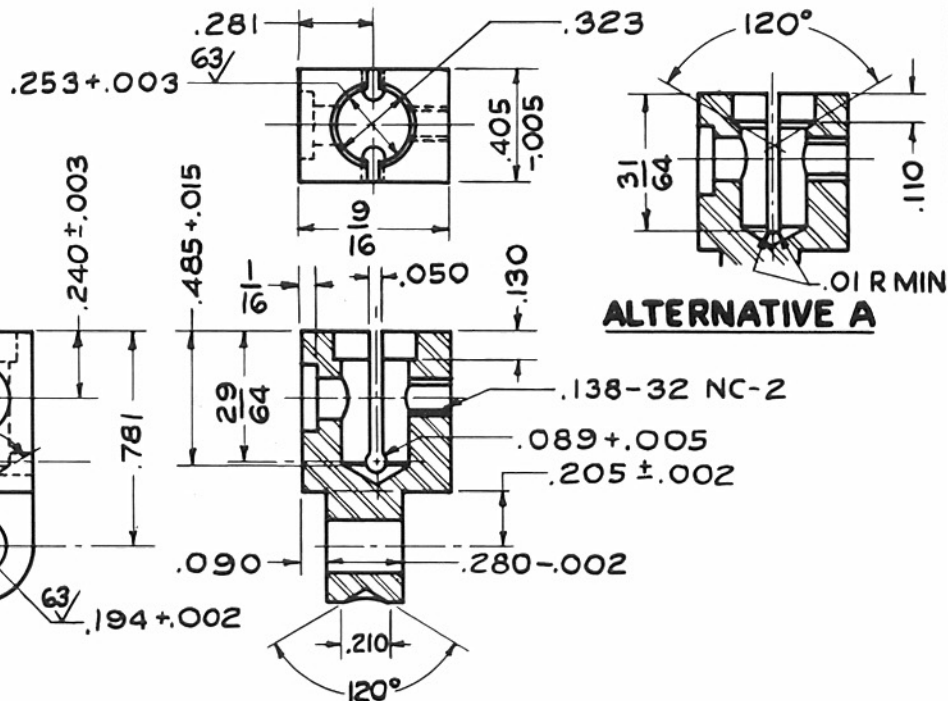
SUBMITTED:

*A. H. Roe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ackerman*  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

**POST, FRONT SIGHT****STEEL FSX 1020**

(7162632)

FINISH  $125^\circ$  OTHER SURFACES, AS SPECIFIED

SUPERSEDES A7162632 WO/C 5-10-48

SCALE  $\frac{2}{1}$ 

A

7162632

A7162633

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

MAY 16, 1946

TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

E. L. 2

ROCK

REVISIONS

1 5-10-48

DRG. PERTAINS TO

B7162616

.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19AG

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 0$ 

DRAFTSMAN

TRACER

L'D'G DRAFTSMAN

CHECKER

O.K.

CHIEF DRAFTSMAN

SUBMITTED:

CHIEF DRAFTSMAN

A.H. Roe

CHIEF DRAFTSMAN

SUBMITTED:

CHIEF DRAFTSMAN

A.H. Roe

CHIEF DRAFTSMAN

ORD. DEPT., U. S. A.

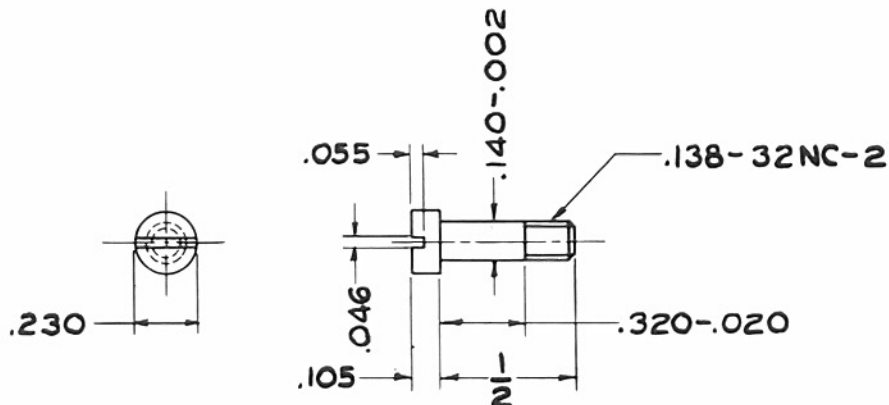
APPROVED BY ORDER OF THE CHIEF

OF ORDNANCE

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



SCREW, CLAMPING, FRONT SIGHT BLADE (7162633)

STEEL FSX1315

FINISH 125/

SUPERSEDES A7162633 WO/C 5-10-48

SCALE  $\frac{2}{1}$ 

A7162633

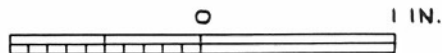


HEAT TREATMENT AND FINAL FINISH

★POST, FRONT SIGHT, ASSEMBLY - B 7162616  
PLUNGER-A5156881SCREW-A5156884  
SPRING-A5156882  
⊕ SCREW-A5156883STAKE  
WASHER-A7110440⊕ NOT REQ'D WHEN  
ALTERNATIVE METHOD  
OF MANUFACTURE OF  
B6144237 IS USED.

SIGHT, BRACKET, GROUP ASSEMBLY (7132923

SUPERSEDES B7132923 w/c 5-10-48

PHYSICAL  
PROPERTIESY. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

FEBRUARY 25, 1947

## REVISIONS

1	5-10-48		

## DRG. PERTAINS TO

51-83-1 30 BMG M19A4 (FXD)  
51-84-1 30 BMG M19A4 (FLEX)  
51-125-1 30 BMG M19A6

DO NOT INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN D.E.R.	TRACER O.K.	L.S.C. DRAFTSMAN
CHECKER R.S.	C.D.	CHIEF DRAFTSMAN

SUBMITTED:

*A.H. Roe*  
ORD. DEPT. U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:  
*Walter R. ...*  
PRO. DEPT. U. S. A.

ORDNANCE DEPT., U. S. A.

★ FINDING DIAGRAM

B 7132923

B7132923

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

A5013249

JUNE 1, 1931

## REVISIONS

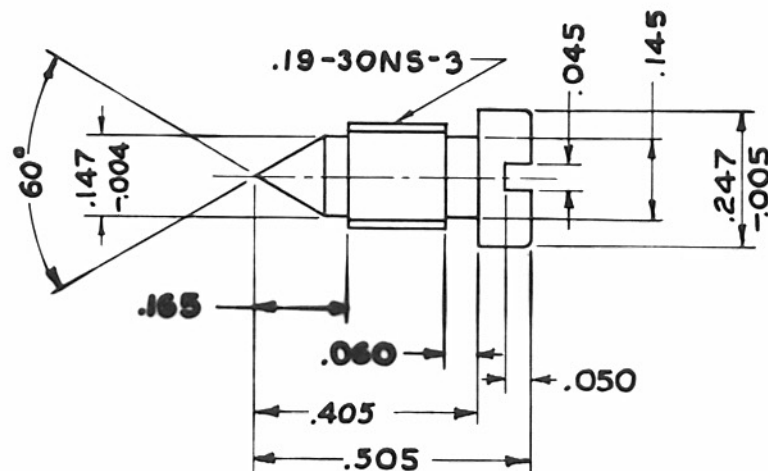
HEAT TREAT  
TYPE II FINISH, CLASS B

Y. P.		RED.		SCL.	
T. S.		BR.		C. C.	.003 TO .005 DEEP
EL 2		ROCK			

12 5-10-48

## DRG. PERTAINS TO

B 144235	30 BMG
B 7132923	M19A4 (FXD)
	M19A4 (FLEX)
	M19AG

INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm -$ ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN <i>E.L.F.</i>	TRACER O.K.	L'D'G DRAFTSMAN
CHECKER <i>E.L.F.</i>	0.0	CHIEF DRAFTSMAN

SCREW, LOCKING, FRONT SIGHT BRACKET (5013249)STEEL FS X1315

FINISH 125/

SUBMITTED:

*A.H. Roe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

WAS A13249

SCALE  $\frac{4}{1}$ 

A 5013249

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

A5013258

JUNE 1, 1931

TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL 2

ROCK

REVISIONS

10 5-10-48

DRG. PERTAINS TO

B 144235

30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6

B7132923

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm$  —ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

TRACER

L'D'G DRAFTSMAN

E. J. J.

O.K.

CHECKED

O.O.

CHIEF DRAFTSMAN

SUBMITTED:

A. H. ROE

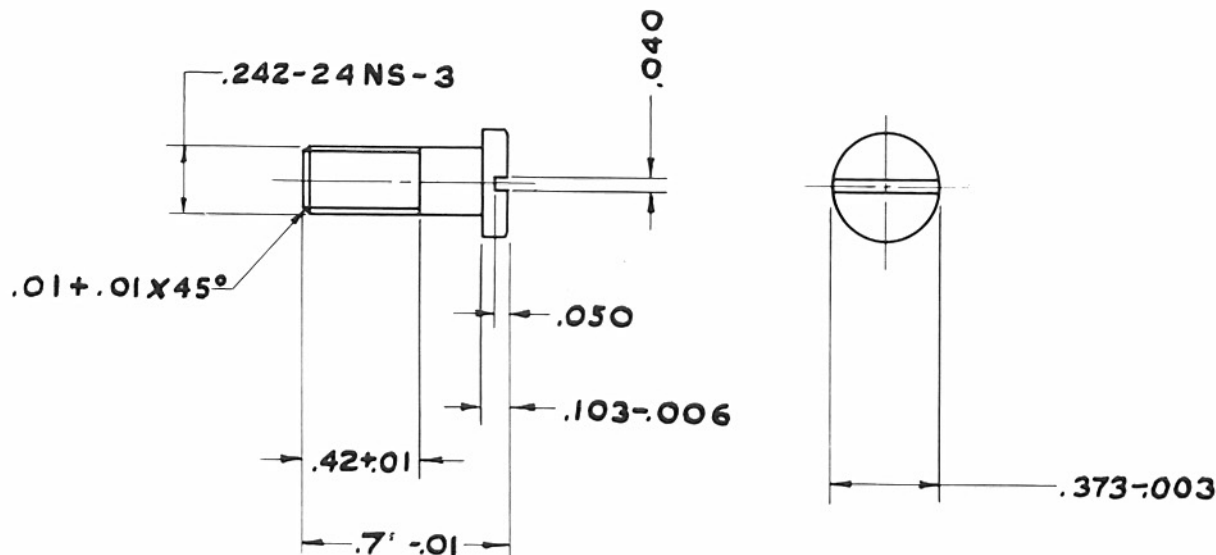
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



SCREW, FRONT SIGHT BRACKET (5013258)

STEEL FS X 1315

FINISH 125/

WAS A 13258

SCALE  $\frac{2}{1}$ 

A 5013258

A 5156881

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

MARCH 10, 1939

TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL 2

ROCK

REVISIONS

6 5-10-48

NOTE: A .249-.002 DIA HARDENED  
AND GROUND STEEL BALL MAY  
BE USED AS AN ALTERNATIVE  
METHOD OF MANUFACTURE.

DRG. PERTAINS TO

B 144235

.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6

B7132923

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL  $\pm$  —FRACTIONAL  $\pm$  —ANGULAR  $\pm$  —

DRAFTSMAN

TRACER

L'D'G DRAFTSMAN

H.O.C.

O.K.

CHECKER

CHIEF DRAFTSMAN

L.S. *SwR*

O.O.

**PLUNGER, FRONT SIGHT**

STEEL FSX 1020

FINISH 63/

(5) 56881

WAS A 156881

SCALE  $\frac{2}{1}$ 

A 5156881

SUBMITTED:

*A.H. Roe*

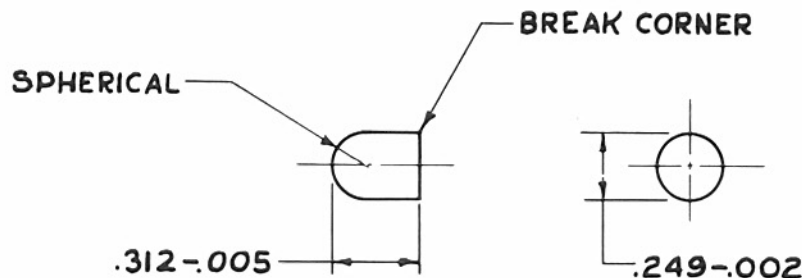
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



A 5156882

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

MARCH 10, 1939

DRAW AT 450°F  
TYPE I FINISH, CLASS OSC  
BAKE ONE HOUR AT 300-350°F

Y. P.	<input checked="" type="checkbox"/>	RED.	<input checked="" type="checkbox"/>	SCL.	<input checked="" type="checkbox"/>
T. S.	<input checked="" type="checkbox"/>	BR.	<input checked="" type="checkbox"/>		
EL. 2	<input checked="" type="checkbox"/>	ROCK	<input checked="" type="checkbox"/>		

## REVISIONS

8 5-10-48

## DRG. PERTAINS TO

B 144235

.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6

B7132923

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN

W.L.M.

TRACER

E.B.

L'D'G DRAFTSMAN

CHECKED

C. P. O. O.

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Asherman  
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

DIAMETER OF WIRE .034  
TOTAL NUMBER OF COILS 15  
OUTSIDE DIAMETER FREE .224 ± .004  
MAX OUTSIDE DIA AT MIN OPERATING HEIGHT .230  
FREE LENGTH 1.00 ± .03  
TYPE OF ENDS SQ. AND GROUND  
WOUND R.H.  
MEAN ASSEMBLED HEIGHT .593  
MIN LOAD AT MEAN ASSEMBLED HEIGHT 9.75 LB  
MINIMUM OPERATING HEIGHT .527  
MIN LOAD AT MINIMUM OPERATING HEIGHT 11.33 LB  
LB PER INCH OF SPRING DEFLECTION 24  
SPRING FUNCTIONS IN HOLE .250  
CALCULATED MAXIMUM SOLID HEIGHT .510

CAUTION: DO NOT COMPRESS SOLID.

**SPRING, FRONT SIGHT**  
**SPRING STEEL WIRE**  
(WD1085 SPECIAL-CLASS A)

5156882

WAS A156882

A 5156882

MADE AT ROCK ISLAND ARSENAL

A 5156883

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

MARCH 10, 1939

TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

8 5-10-48

DRG. PERTAINS TO

B 144235

.30 BMG

M 19A4 (FXD)

B7132923

M 19A4 (FLEX)

M 19A6

INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm$  —ANGULAR  $\pm 5^\circ$ 

DRAFTSMAN

TRACER

L'D'G DRAFTSMAN

H.O.C.

O.K.

CHECKER

CHIEF DRAFTSMAN

L.S.C.

O.O.

SUBMITTED:

A.H. Roe

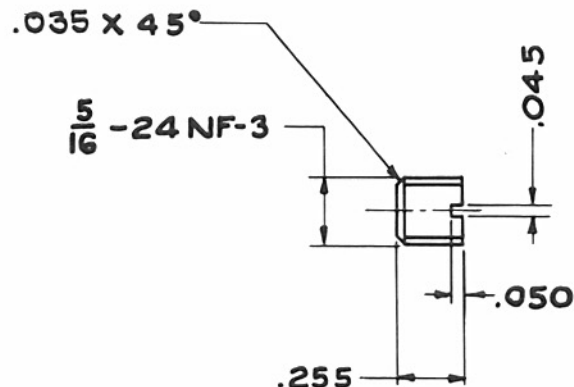
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

SCREW, RETAINING, FRONT SIGHTSTEEL FSX1315

FINISH 125/

(5156883

WAS A156883

SCALE  $\frac{2}{1}$ 

A 5156883

A5156884

MARCH 10, 1939

REVISIONS

7 5-10-48

DRG. PERTAINS TO

B 144235

B7132923

.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm \frac{1}{16}$   
ANGULAR  $\pm 5^\circ$

DRAFTSMAN H.D.C.	TRACER O.K.	L'D'G DRAFTSMAN
CHECKER L.S.C.	0.0.	CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

TYPE II FINISH, CLASS B

Y. P.

RED.

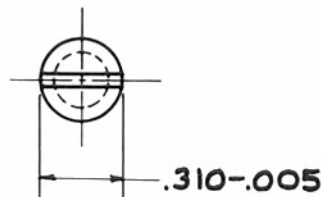
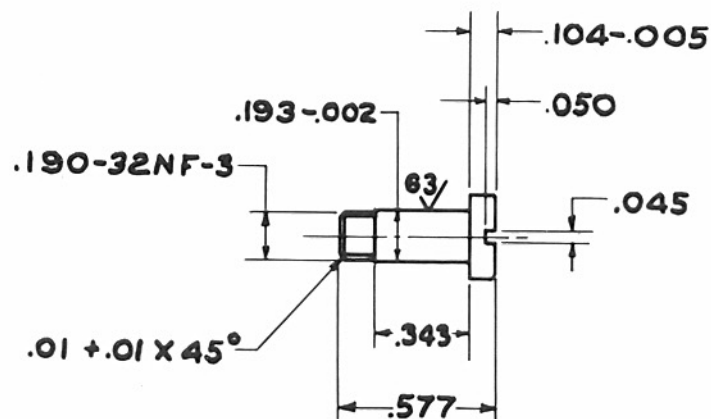
SCL.

T. S.

BR.

EL 2

ROCK



SCREW, BEARING, FRONT SIGHT

STEEL FS X 1315

FINISH  $\frac{125}{1}$  OTHER SURFACES, AS SPECIFIED

WAS A 156884

SCALE  $\frac{2}{1}$ 

A

5156884



A7110440

JANUARY 31, 1944

REVISIONS

3 5-10-48

DRG. PERTAINS TO

B 144235

B7132923

30 BMG

M19A4 (FXD)

M19A4 (FLEX)

M19A6

INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL ± —

FRACTIONAL ± —

ANGULAR ± —

DRAFTSMAN

H. B. 26

TRACER

O.K.

L'D'G DRAFTSMAN

CHECKED

H.W. J.

O.O.

CHIEF DRAFTSMAN

SUBMITTED:

A.H. Roe

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

TYPE II FINISH, CLASS B

Y. P.

RED.

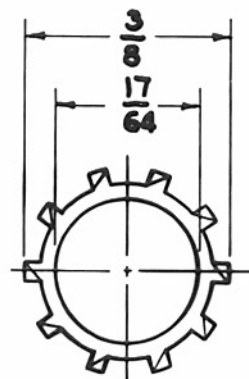
SCL.

T. S.

BR.

EL 2

ROCK

WASHER, LOCK.022 STEEL - COMMERCIAL

7110440

SHAKEPROOF EXTERNAL TOOTH LOCK WASHER NO. 1114-05 OR EQUAL

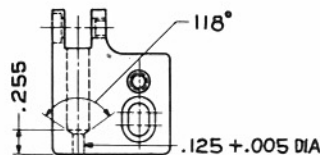
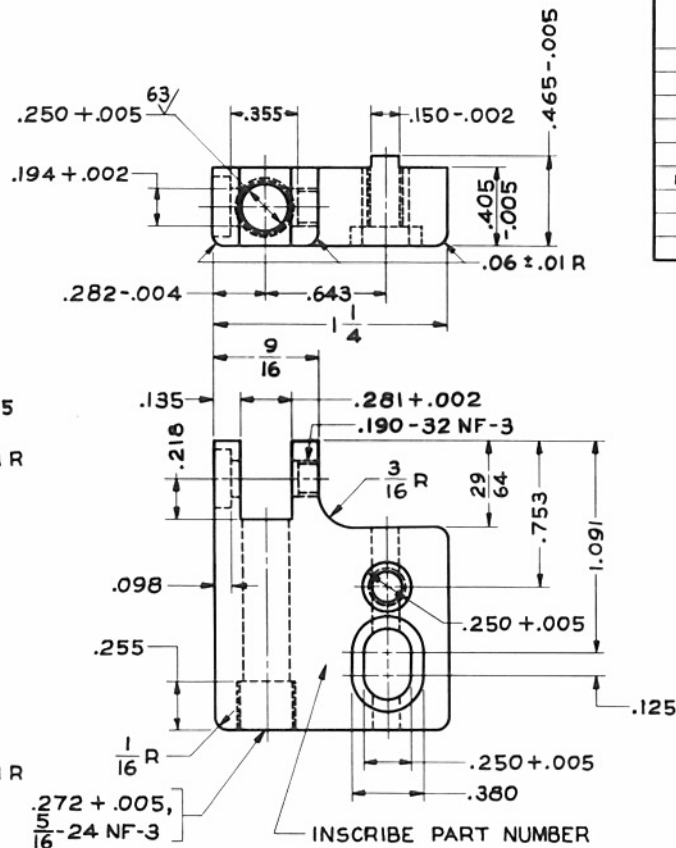
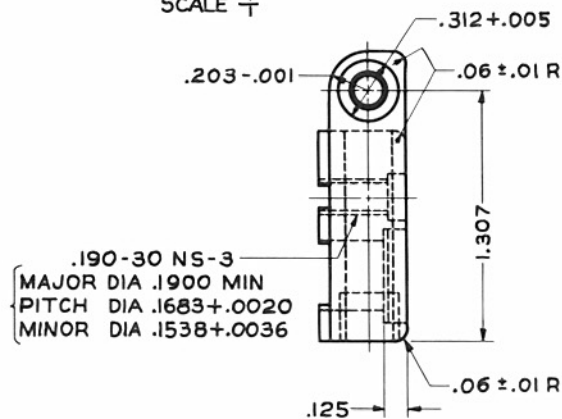
SUPERSEDES A7110440 WO/C 5-10-48

SCALE  $\frac{4}{1}$ 

A 7110440

HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B

VIEW SHOWING ALTERNATIVE  
METHOD OF MANUFACTURESCALE  $\frac{1}{16}$ 

BODY, FRONT SIGHT

STEEL FSX1020

FINISH  $\frac{125}{16}$ , OTHER SURFACES  
AS SPECIFIED

(614237

SCALE  $\frac{2}{1}$ 

WAS B144237

B 6144237

PHYSICAL  
PROPERTIESY. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

MARCH 10, 1939

REVISIONS

11 5-10-48

DRG. PERTAINS TO

B 144235 30B MG M19A4  
(FXD) & (FLEX)  
B 7132923 30B MG M19A4  
(FXD) & (FLEX)

DO

INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL: .005  
FRACTIONAL:  
ANGULAR:  $5^{\circ}$  1/64

DRAFTSMAN	TRACER	CHECKER	CHIEF DRAFTSMAN
H.D.C.	L.R.E.	<i>[Signature]</i>	G.D.

SUBMITTED:

*[Signature]*

ORD. DEPT. U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*[Signature]*

ORD. DEPT. U. S. A.

ORDNANCE DEPT., U. S. A.

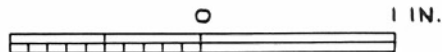
B6144237

HEAT TREATMENT AND FINAL FINISH

★POST, FRONT SIGHT, ASSEMBLY - B 7162616  
PLUNGER-A5156881SCREW-A5156884  
SPRING-A5156882  
⊕ SCREW-A5156883STAKE  
WASHER-A7110440⊕ NOT REQ'D WHEN  
ALTERNATIVE METHOD  
OF MANUFACTURE OF  
B6144237 IS USED.

SIGHT, BRACKET, GROUP ASSEMBLY (7132923

SUPERSEDES B7132923 w/c 5-10-48

PHYSICAL  
PROPERTIESY. P.  
T. S.  
EL. 2  
RED  
BR.  
ROCK.  
SCL.

FEBRUARY 25, 1947

## REVISIONS

1	5-10-48		

## DRG. PERTAINS TO

51-83-1 M19A4 (FXD) 30 BMG  
51-84-1 M19A4 (FLEX) 30 BMG  
51-125-1 M19A6 30 BMG

DO NOT INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL ± —  
FRACTIONAL ± —  
ANGULAR ± —

DRAFTSMAN D.E.R.	TRACER O.K.	L'S & C DRAFTSMAN
CHECKER R.S.	C.D.	CHIEF DRAFTSMAN

SUBMITTED:

*A.H. Roe*  
ORD. DEPT. U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:  
*Walter R. ...*  
ORD. DEPT. U. S. A.

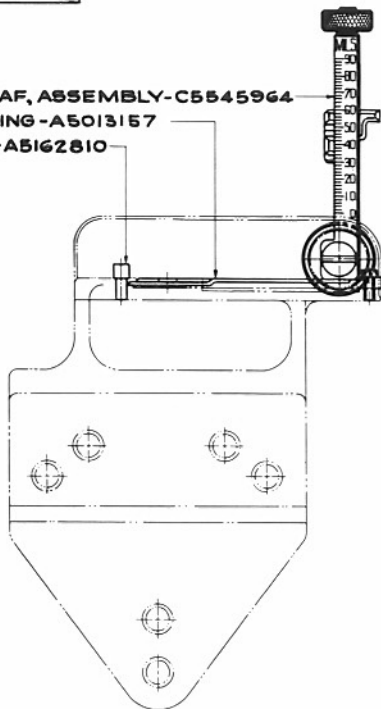
ORDNANCE DEPT., U. S. A.

★ FINDING DIAGRAM

B 7132923

B7132923

★ LEAF, ASSEMBLY-C5545964  
 SPRING-A5013157  
 PIN-A5162810



SIGHT, REAR, GROUP, ASSEMBLY

C5564906

PLUNGER-A5013155  
 SPRING-A5013154  
 KNOB-B6008809  
 LOCATE KNOB AND DRILL HOLE  
 .0625 ± .0010 DIA THROUGH SCREW,  
 STAKE KNOB OVER ENDS OF PIN.  
 PIN-A5013700  
 BUSHING-A5159870  
 SCALE-A5152430  
 SCREW-A5013167  
 SCREW-A5152429  
 BASE-C5545965

NOTE:  
 STAKE BUSHING A5159870  
 AT ASSEMBLY

PHYSICAL PROPERTIES		MARCH 10, 1939	
		REVISIONS	
Y. P.	7	5-10-48	
T. S.	8	10-21-48	
EL. 2	9	11-15-49	
RED			
BR.			
ROCK.			
SCL.			

DRG. PERTAINS TO

51-63-1	30 SHMS MIRAG (FED)
51-64-1	30 SHMS MIRAG (FLS)
51-125-1	30 SHMS MIRAG

## ★ FINDING DIAGRAM

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL 2  
 FRACTIONAL 2  
 ANGULAR 1

MEB, Z. C.

SUBMITTED:

A. H. ROE

WAS C64906

DO NOT  
 INSCRIBE PART NO.

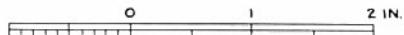
C 5564906

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE

Walter C. Anderson

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL



C5564906

HEAT TREATMENT & FINAL FINISH		PHYSICAL PROPERTIES				MAY 1, 1989					
<i>DRAW AT 450°F</i>		Y.P.		RED.		ROCK.		REVISIONS			
		T.S.		BR.				16	12-18-41	22	2-7-44
		EL.2						17	2-11-42	23	7-28-49
DO NOT INSCRIBE PART NO.		51-13 : 30BAR-M18				18	2-19-42	24	3-24-49		
		51-125 : 30BMG-M19A6				19	4-16-42	25	5-24-49		
						20	7-23-42				
						21	7-27-43				
Δ ☆ DIAMETER OF WIRE ..... .018 ☆ TOTAL NUMBER OF COILS ..... 10 1/2 MINIMUM INSIDE DIAMETER, FREE ..... Δ ☆ OUTSIDE DIAMETER, FREE ..... .118 ± .002 ☆ MAXIMUM OUTSIDE DIAMETER AT MINIMUM OPERATING HEIGHT .. .123 ☆ FREE LENGTH ..... .38 ± .030 Δ ☆ TYPE OF ENDS ..... PLAIN ENDS GROUND ☆ WOUND ..... R.H. MEAN ASSEMBLED HEIGHT ..... .25 Δ ☆ LOAD AT MEAN ASSEMBLED HEIGHT ..... 2 LBS. ± .56 LBS. MINIMUM OPERATING HEIGHT ..... .206 Δ ☆ LOAD AT MINIMUM OPERATING HEIGHT ..... 2.67 LBS. ± .75 LBS. LBS. PER INCH OF SPRING DEFLECTION ..... 15. APPROX. SPRING FUNCTIONS IN HOLE ..... .125 SPRING FUNCTIONS OVER ROD ..... ☆ CALCULATED MAXIMUM SOLID HEIGHT ..... .190		DR'G. PERTAINS TO									
		51-70 : 50BMG-M2 HB FLEX.									
		51-71 : 50BMG-M2 HB FXD.									
		51-80 : 50BMG-M2 HB FXD.									
		D6528337 : 51GHT, REAR, GR. ASM.									
		51-83 : 30BMG-M19A4 FXD.									
		51-84 : 30BMG-M19A4 FLEX.									
		C5564906 : 51GHT, REAR, ASM.									
		51-102 : 30BAR-M18A2									
		D6535423 : 51GHT, REAR, GR. ASM.									
		51-74 : 30BMG-M2 HB FXD.									
		51-75 : 30BMG-M2 HB FLEX.									
		51-77 : 30BMG-M19A2									
		BUTTMAN YRADER LBS. WITHIN									
		R.C. R.S. 6 P.O.									
CHECKER W.S.B. 6.0. CHY. 5.1											
SUBMITTED:											
LT. COL., ORD. DEPT. U.S.A.											
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE											
CAME ORD. DEPT. U.S.A.											
ORDNANCE DEPARTMENT, U.S.A.											

Δ CAUTION: DO NOT COMPRESS SOLID. NOTE: 0.5% OF SPRINGS WILL BE FATIGUE TESTED BETWEEN ASSEMBLED HEIGHT AND MINIMUM OPERATING HEIGHT FOR 15,000 CYCLES. THE LOAD AT ASSEMBLED HEIGHT, AFTER TESTING, SHOULD NOT BE LESS THAN .32 LBS.

SPRING, REAR SIGHT WINDAGE CLICK PLUNGER  
 STEEL WD 1085 SPECIAL  
 USA SPEC 48-7-1 (CLASS A)

(5013154)

☆ MANUFACTURING DATA

Δ MANDATORY REQUIREMENTS

SUPERSEDES OLD TRACING A13154  
 UNDER REVISION DATE OF DEC. 18, 1941.

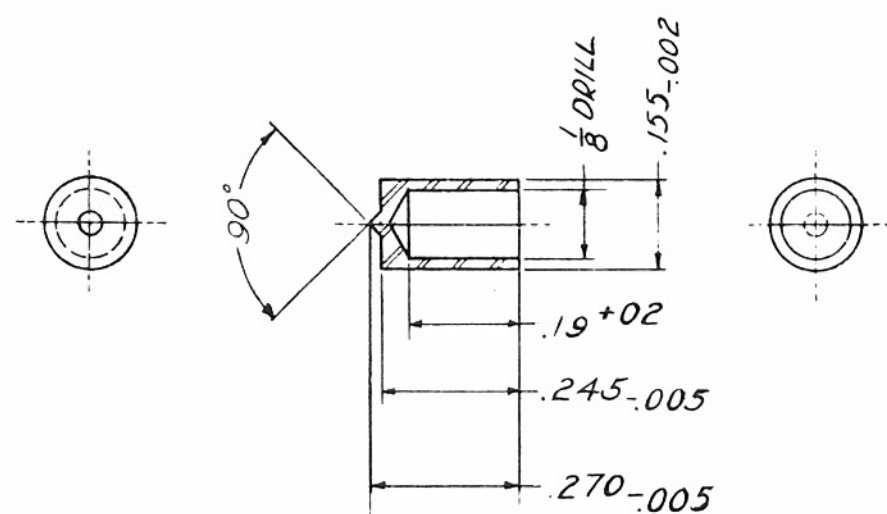
A5013154

A13154

SUPERSEDES A13154

13155

HEAT TREATMENT & FINAL FINISH	PHYSICAL PROPERTIES						MAY 1, 1929
HEAT TREAT.	Y.P.		RED.		SOL.		REVISIONS
	T.S.		BR.				11 2-7-40 15 12-9-42
PROTECTIVE FINISH TYPE II CLASS A OR B.	EL 2		ROCK	A73-77			12 5-1-41 16 7-27-43
					19 3-24-49		13 4-16-42 17 4-30-46
							14 7-23-42 18 7-28-49



PLUNGER, REAR SIGHT WINDAGE CLICK  
STEEL WD1085 COLD DRAWN  
BREAK CORNERS  
FINISH

5013155

(A13155-17)

TOLERANCE .01 ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED.  
 SUPERSEDES OLD TRACING A13155  
 UNDER REVISION DATE OF FEB. 7, 1940.

SCALE 4/1

DO NOT INSCRIBE PART NO.

A5013155

A13155

M.O.L.	26 3'	G.P.O.
E.C.P.	10 1/2"	78A1 1700
J.N. Drawing		
LT. COL. U.S. DEPT. U.S.A.		
ORDNANCE DEPT. U.S.A.		

15-15 SUPERSEDES A13155





A13167

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

MAY 1, 1929

Y.P.

RED.

ROCK

REVISIONS

15 8-5-42

16 11-7-42

17 12-15-42

18 7-27-43

19 4-30-46

20 3-30-49

DRG. PERTAINS TO

51-70 50 BMG-M2HB(FLEX)

51-71 50 BMG M2HB(FXD)

51-74 50 BMG M2HB(FXD)

51-75 30 BMG M2HB(FLEX)

51-77 30 BMG-M19 A2

51-83 30 BMG-M19A4(FXD)

51-84 30 BMG-M19A4(FLEX)

51-88 50 BMG-M2HB(FXD)

C5564906

C64906 SIGHT, REAR, ASM.

OFFICER: 1/2 H.M.F. 1/2 E.

DEPT. 1/2 H.M.F. 1/2 E.

SUBMITTED

DONOT INSCRIBE PART NO

SPRINGFIELD ARMORY  
A 5013167

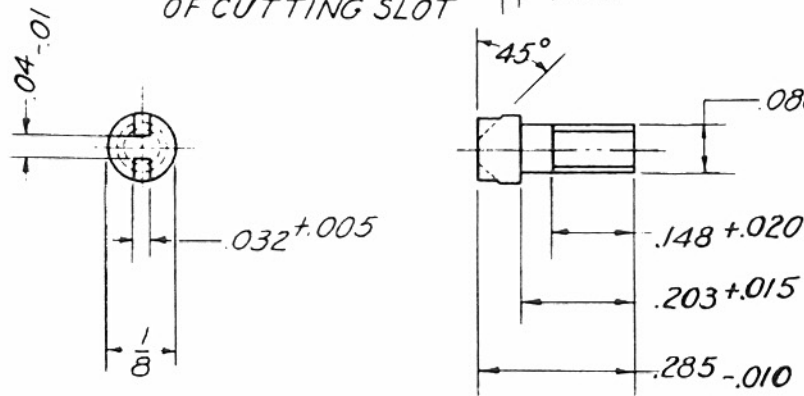
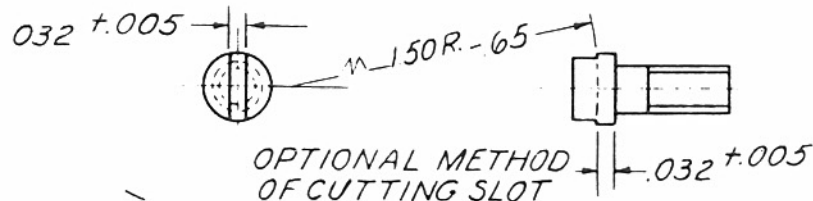
A13167

APPROVED BY ORDER OF THE  
CHIEF OF ORDNANCEJ. H. BUCHER  
COL. ORD. DEPT. U.S.A.

ORDNANCE DEPT. U.S.A.

SCALE  $\frac{4}{1}$ 

15-15 SUPERSEDES A13167



5013167  
A13167-19  
SCREW, REAR SIGHT WINDAGE SCALE  
STEEL WD. 1112 COLD DRAWN  
FINISH f

TOLERANCE  $\pm$  0.01 ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED.  
SUPERSEDES OLD TRACING A13167 UNDER  
REVISION DATE OF AUGUST 5, 1942.

A13700

## HEAT TREATMENT &amp; FINAL FINISH

## PHYSICAL PROPERTIES

APRIL 30, 1934

Y.P.

RED.

ROCK

## REVISIONS

T.S.

BR.

16 2-1-44

17 4-30-46

18<sup>4</sup> 7-28-49

19 3-24-49

## DR'G. PERTAINS TO

51-83 30BMG-M19A4(FXD)

51-70 50BMG-M2HB(FLEX)

51-71 50BMG-M2HB(FXD)

0652837 SIGHT, REAR, GR. ASM.

51-77 30BMG-M19A2

E64003 LATCH, WITH WINDAGE

C5564003 SCREW &amp; BASE ASM.

51-13 30 B.A.R. M18

51-125 30BMG-M19A6

51-84 30BMG-M19A4(FLEX)

51-88 50BMG-M2HB(FXD)

C5564906 SIGHT, REAR, ASM.

DESIGNER TRACER LOG LIFTSMAN

CHECKER CHIEF LIFTSMAN

SUBMITTED:

ORD ENG. ORD. DEPT.

APPROVED BY ORDER OF THE

CHIEF OF ORDNANCE

LI COL. ORD. DEPT.

ORDNANCE DEPT., U. S. A.

PROTECTIVE FINISH TYPE II CLASS A OR B.

DO NOT

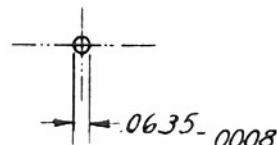
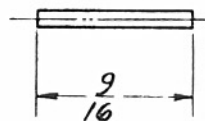
INSCRIBE PART NO.

51-102 30 B.A.R.-M1918 A2

06535423 SIGHT, REAR, GR. ASM.

51-74 30BMG-M2HB(FXD)

51-75 30BMG-M2HB(FLEX)



5013700

PIN, REAR SIGHT WINDAGE KNOB

(A13700-17)

STEEL W.D. 1095

FINISH f

TOLERANCE  $\pm .01$  ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIEDSUPERSEDES OLD TRACING A13700  
UNDER REVISION DATE OF FEB 1, 1944.SCALE  $\frac{2}{1}$ 

SPRINGFIELD ARMORY

A5013700

A13700

SUPERSEDES A13700

A 5152429

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

MARCH 10, 1939

TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

7 5-10-48

DRG. PERTAINS TO

C5564906

30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6INSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$   
FRACTIONAL  $\pm$  —  
ANGULAR  $\pm 1^\circ$ DRAFTSMAN  
M.T.TRACER  
O.K.

L'D'G DRAFTSMAN

CHECKED  
L.S.C.  
*W.R.*

CHIEF DRAFTSMAN

SUBMITTED:

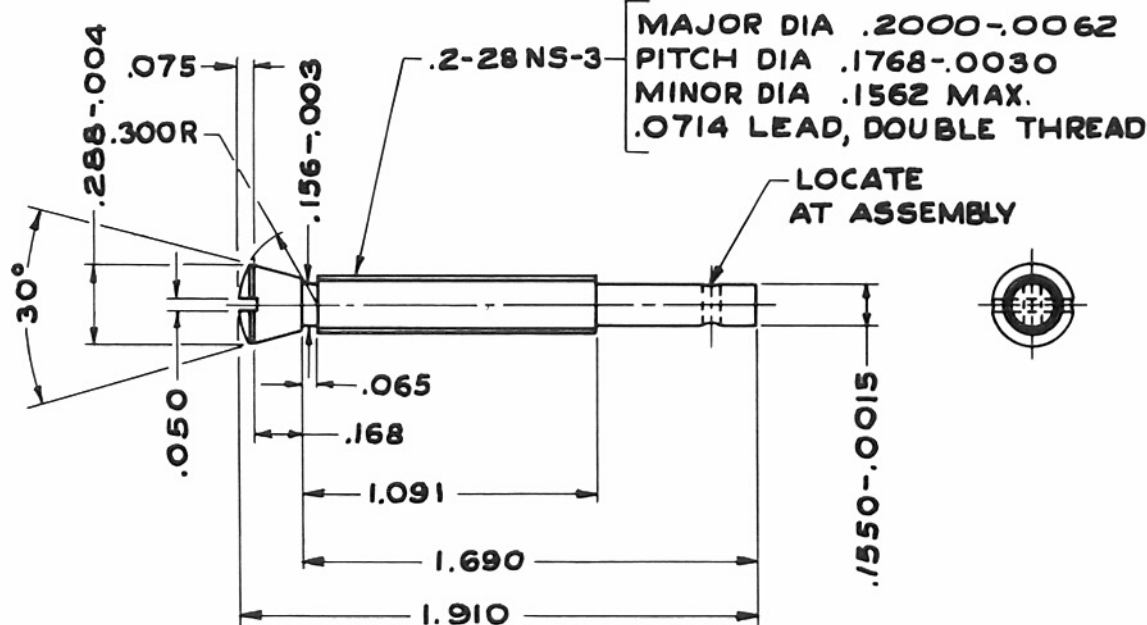
*A.H. Roe*

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:*Walter Ackerman*

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

SCREW, WINDAGE, REAR SIGHTSTEEL FSX1020

FINISH 125/

SCALE  $\frac{2}{1}$ 

WAS A152429

A 5152429

A 5152430

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

MARCH 10, 1939

TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

REVISIONS

8 5-10-48

DRG. PERTAINS TO

C5564906

.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A6

INSCRIBE PART NO.

DO NOT

TOLERANCE ON DIMENSIONS

NOT OTHERWISE SPECIFIED

DECIMAL  $\pm .005$ FRACTIONAL  $\pm -$ ANGULAR  $\pm -$ 

DRAFTSMAN

H.D.C.

TRACER

O.K.

L'D'G DRAFTSMAN

CHECKER

L.S.C.

CHIEF DRAFTSMAN

SUBMITTED:

A.W. Roe

ORD. DEPT., U. S. A.

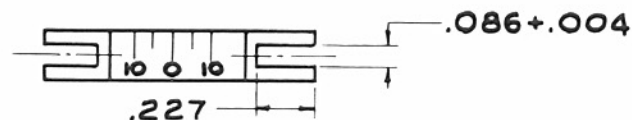
APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

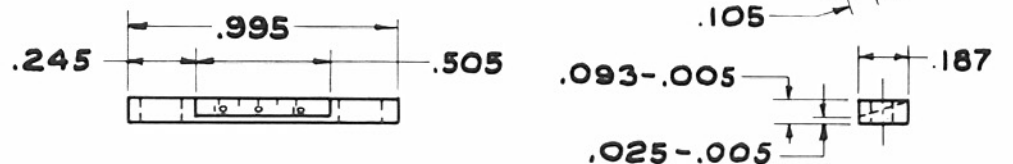
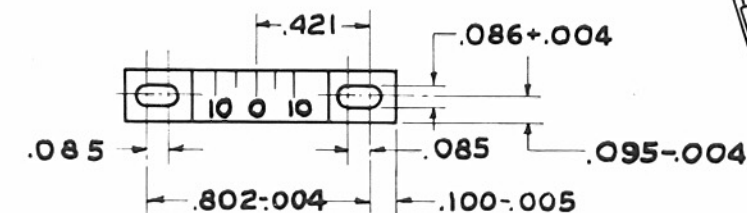
ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

NOTE:

GRADUATIONS .01 WIDE,  
.005 DEEP, FIGURES .08  
HIGH. FILL GRADUATIONS  
AND FIGURES WITH  
WHITE ENAMEL.

VIEW SHOWING ALTERNATIVE METHOD OF MANUFACTURE



SCALE, WINDAGE, REAR SIGHT (5152430)  
STEEL FSX1020  
FINISH 125/V

WAS A152430

SCALE  $\frac{2}{1}$ 

A 5152430

ORDNANCE DEPT., U. S. A.

A 5162810

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

MARCH 10, 1939

TYPE II FINISH, CLASS B

Y. P.

RED.

SCL.

T. S.

BR.

EL 2

ROCK

REVISIONS

6 5-10-48

DRG. PERTAINS TO

C5564906

.30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19AGINSCRIBE PART NO.  
DO NOTTOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIEDDECIMAL  $\pm .005$ FRACTIONAL  $\pm 1/64$ ANGULAR  $\pm -$ 

DRAFTSMAN

APB

TRACER

O.K.

L'D'G DRAFTSMAN

CHECKED

LSC

CHIEF DRAFTSMAN

SUBMITTED:

A.M. Roe

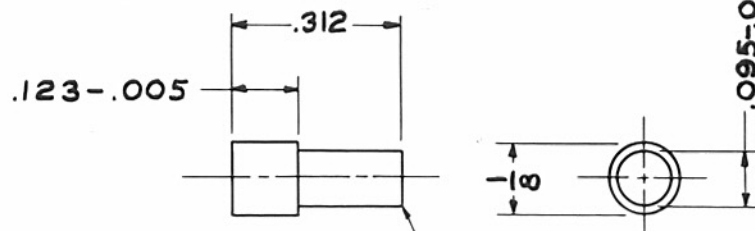
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.



BREAK CORNER

PIN, STOP, REAR SIGHT LEAF (5162810)

STEEL FSX 1315

FINISH 125/

WAS A162810

SCALE  $\frac{4}{1}$ 

A 5162810

## HEAT TREATMENT AND FINAL FINISH

DO NOT INSCRIBE PART NO.

51-75 30 BMG M2HB (FLEX)

## PHYSICAL PROPERTIES

APRIL 30, 1934

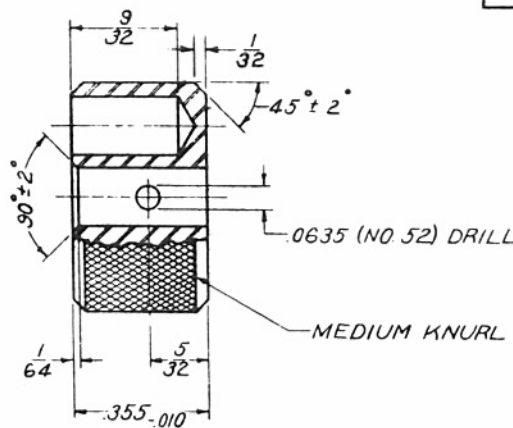
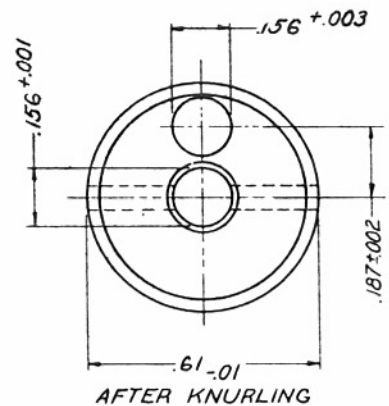
## REVISED

PROTECTIVE FINISH TYPE II GLASS A O B.

Y.P.	21	4-15-34
T.S.	22	5-6-44
EL. 2	23	4-30-16
RED.	24	2-28-19
BR.	25	3-30-19
ROCK.		

## DRG. PERTAINS TO

51-13 30 BAR-M18  
 51-102 30 BAR-M18A2  
 06535425 SIGHT REAR, GR. ASM  
 51-70 50 BMG-M2HB (FLEX)  
 51-71 50 BMG-M2HB (FAD)  
 51-80 50 BMG-M2HB (FAD)  
 06528337 SIGHT REAR, GR. ASM  
 51-77 30 BMG-M19A2  
 65507416 SIGHT REAR, PLATE  
 51-83 30 BMG-M19A4 (FAD)  
 51-84 30 BMG-M19A4 (FLEX)  
 51-125 30 BMG-M19A6  
 65561206 SIGHT REAR, ASM  
 51-74 30 BMG-M2HB (FAD)



KNOB, REAR SIGHT WINDAGE SCREW  
STEEL WD. 1112 COLD DRAWN  
FINISH f

6008809

B-8809-23-

TOLERANCE ±.01 ALLOWED ON ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED.

SUPERSEDES OLD TRACING B8809 UNDER REVISION DATE OF APRIL 15, 1944.

SCALE 4/1

SPRINGFIELD ARMOY  
B 6008809

B-8809

OFFICER	TRACER	LOG OFFICER
H.M.F.	H.M.F.	H.M.F.
CHECKER		CHIEF OFFICER
H.M.F.		H.M.F.
SUBMITTED:		
Approved by _____		
NO. ORG. ENG. ORD. DEPT.		
APPROVED BY ORDER OF THE CHIEF OF ORDNANCE:		
B. Whitaker		
LT COL. ORD. DEPT.		
ORDNANCE DEPT., U.S.A.		

SUPERSEDES B8809



HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B  
SPEC 57-0-2PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED

BR.

ROCK.

SCL.

JUNE 1, 1931

REVISIONS

10 5-10-48

11 11-15-49

DRG. PERTAINS TO

C5509177 .30 BMG  
M17A1 (WC)  
C5564096 .30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

~~DO~~ INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL: —  
FRACTIONAL: —  
ANGULAR: —

DRAFTSMAN	TRACER	CHECKER	CHECKER	CHECKER	CHECKER
C.S.S.	E.R.G.	C.S.S.	E.R.G.	C.S.S.	E.R.G.
CHECKER	CHECKER	CHECKER	CHECKER	CHECKER	CHECKER
CHECKER	CHECKER	CHECKER	CHECKER	CHECKER	CHECKER

SUBMITTED:

A.H. ROE

ORD. DEPT., U. S. A.

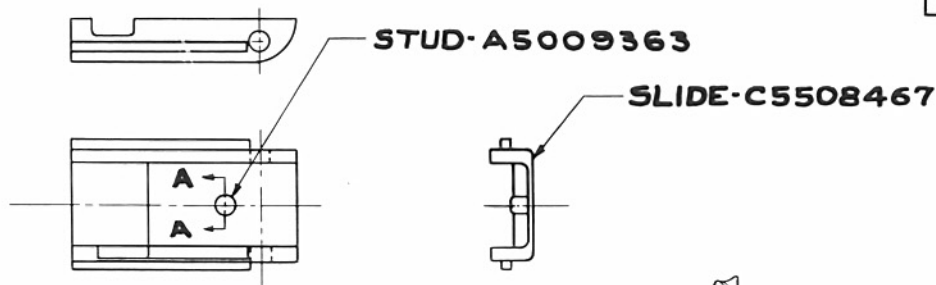
APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

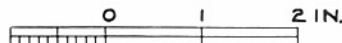


SECTION A-A

SCALE  $\frac{4}{1}$ 

SLIDE, FEEDBELT, ASSEMBLY

6131262



WAS B131262

B 6131262

B6131262

## HEAT TREATMENT &amp; FINAL FINISH

DRG. PERTAINS TO CONT.

## PHYSICAL PROPERTIES

DEC. 1, 1926

## REVISIONS

~~B7312639 SLIDE, FEED BELT, ASM.~~~~B7312641 PAWL, FEED BELT, ASM.~~~~Y.P.~~~~T.S.~~~~EL. 2~~~~RED.~~~~HT. T.~~~~GR.~~~~SCL.~~~~W.C.~~

10 10-20-37 15' 2-10-45

11' 2-7-38 16' 4-28-45

12' 3-10-39 17' 12-20-48

13' 7-17-42

14' 8-17-42

## DRG. PERTAINS TO

~~B6261110 ALL 50 BMG-M2~~~~B6147759 ALL 30 BMG-M2~~~~51133 50 BMG-T36~~~~51134 50 BMG-T25 F3~~~~B147759 SLIDE, FEED BELT, ASM.~~~~B261110 SLIDE, FEED BELT, ASM.~~~~B131262 SLIDE, FEED BELT, ASM.~~~~B17560 SLIDE, FEED BELT, ASM.~~~~B17693 SLIDE, FEED BELT, ASM.~~

## SYMBOL

OBS 234

DFTSMAN TRACER LSG DFTSMAN

2170 2170 2170

CHIEF OF THE CHIEF OF THE CHIEF OF THE

SUBMITTED

MAJOR ORD. DEPT. U.S.A.

APPROVED BY ORDER OF THE

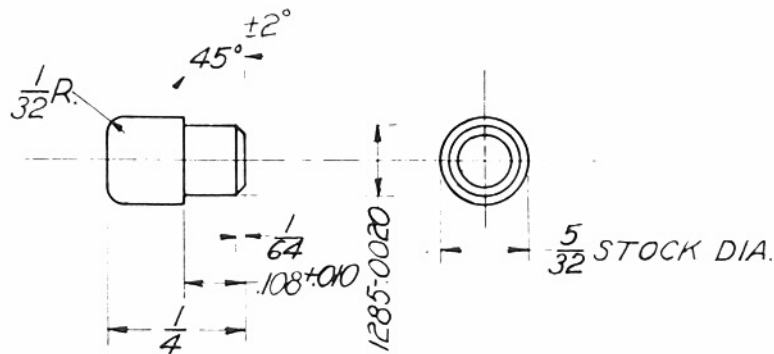
CHIEF OF ORDNANCE:-

LT. COL. J. D. DEPT. U.S.A.

ORDNANCE DEPT. U.S.A.

SUPERSEDES A9363

DO NOT INSCRIBE PART NO.



STUD, BELT FEED PAWL SPRING

STEEL-WD 1115.

FINISH f

MANUFACTURING C

TOLERANCE  $\pm .01$  ALLOWED ON ALL DIMENSIONS  
UNLESS OTHERWISE SPECIFIED.

SUPERSEDES OLD TRACING A-9363

UNDER REVISION DATE OF OCT. 20, 1937 SCALE  $\frac{4}{1}$ 

5009363

A 5009363

A 9363

A 5009363

HEAT TREATMENT AND FINAL FINISH

TYPE II FINISH, CLASS B  
SPEC 57-0-2PHYSICAL  
PROPERTIES

Y. P.

T. S.

EL. 2

RED

BR.

ROCK.

SCL.

JUNE 1, 1931

REVISIONS

10 5-10-48

11 11-15-49

DRG. PERTAINS TO

C5509177 .30 BMG  
M17A1 (WC)  
C5564096 .30 BMG  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

~~DO~~ INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL: —  
FRACTIONAL: —  
ANGULAR: —

DRAFTSMAN	TRACER	CHECKER	CHEF DRAFTSMAN
C.S.S.	E.R.G.	C.S.	

SUBMITTED:

A.H. ROE

ORD. DEPT., U. S. A.

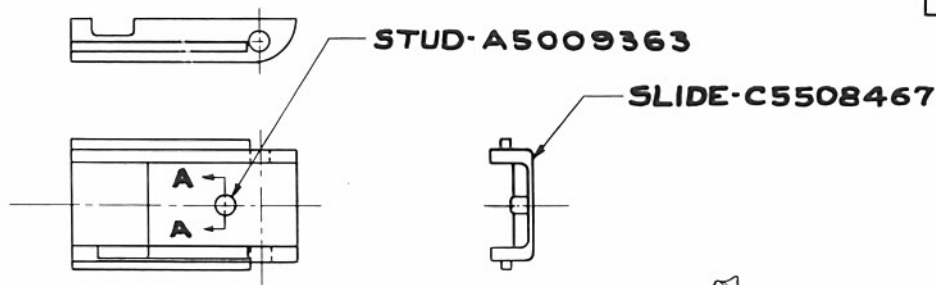
APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL

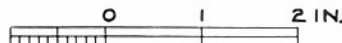


SECTION A-A

SCALE  $\frac{4}{1}$ 

SLIDE, FEEDBELT, ASSEMBLY

6131262

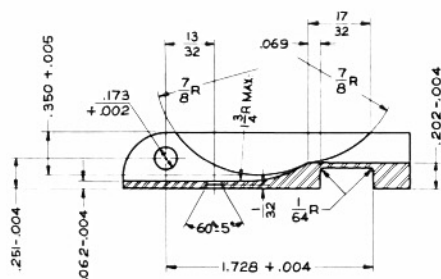
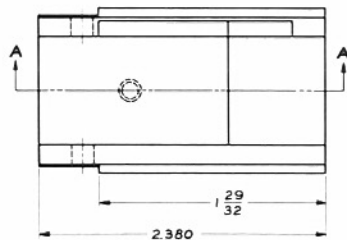
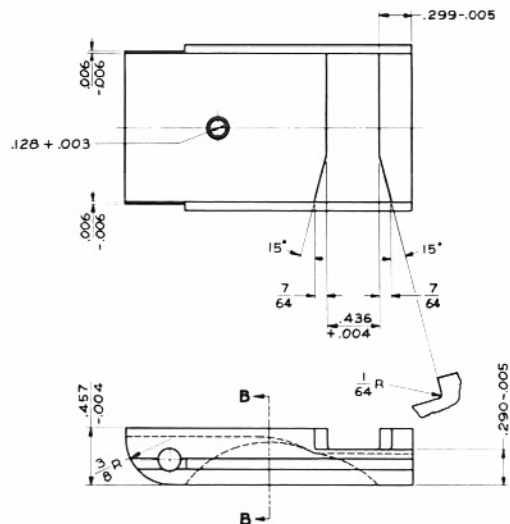


WAS B131262

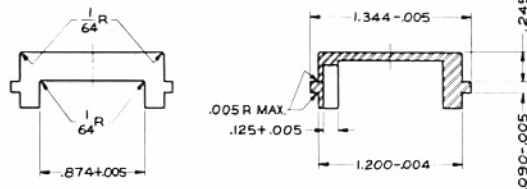
B 6131262

B6131262

HEAT TREAT



**SECTION A-A**



**SECTION B-B**

SLIDE, FEED, BELT (5508467)  
STEEL FSX1335  
FINISH 125/

PHYSICAL PROPERTIES		JUNE 1, 1931	
		REVISONS	
Y P		14	5-10-48
T S			
EL. 2			
RED			
BR			
ROCK	A78-83		
SCL			
CC	DRG - 518 DEEP		

DRG. PERTAINS TO

B6131262

30 BMG  
M17A1 (WC)  
30 BMG  
M19A4 (FXD)  
30 BMG  
M19A4 (FLEX)  
30 BMG  
M19A5 (FXD)  
30 BMG  
M19A6

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL : .008  
FRACTIONAL :  $\frac{1}{64}$   
ANGULAR :  $2^\circ$

DRAPPEMAN	TRAILER	L.O.D. DRAPPEMAN
M.F.A.	L.R.E.	
COACH		L.O.D. DRAPPEMAN

SUBMITTED

A. H. Roe

ORD DEPT U S A  
APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE.

Walter Askegaard  
ORD DEPT U S A.

ORDNANCE DEPT., U. S. A.

MADE AT ROCK ISLAND ARSENAL.

WAS C 8467

DO NOT INSCRIBE PART NO.

SCALE  $\frac{2}{1}$  05508467

C5508467

HEAT TREATMENT AND FINAL FINISH

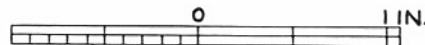
TYPE II FINISH, CLASS B

SPRING-B6017485

PIN-A5020577

SPRING, SEAR, ASSEMBLY

(6131265

PHYSICAL  
PROPERTIES

Y. P.
T. S.
EL. 2
RED
BR.
ROCK.
SCL.

JUNE 1, 1931

## REVISIONS

11 5-10-48

## DRG. PERTAINS TO

51-10-1	.30 BMG M17A1 (WC)
51-83-1	.30 BMG M19A4 (FXD)
51-84-1	.30 BMG M19A4 (FLEX)
51-114-1	.30 BMG M19A5 (FXD)
51-125-1	.30 BMG M19A6

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL: —  
FRACTIONAL: —  
ANGULAR: —

DRAFTSMAN E.C.P.	TRACER A.V.C.	L.D.D. DRAFTSMAN
CHECKER G.D.	CHECKER D.D.	CHIEF DRAFTSMAN

SUBMITTED:

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

WAS B131265

B 6131265

B6131265

A 5020577

JUNE 1, 1931

HEAT TREATMENT &amp; FINAL FINISH

PHYSICAL PROPERTIES

HEAT TREAT  $\frac{1}{2}$  INCH OF BEVELED END

Y. P.

RED.

SCL.

T. S.

BR.

EL. 2

ROCK

C55-60

REVISIONS

12 5-10-48

DRG. PERTAINS TO

B6131265

30 BMG  
M17A1 (WC)  
M19A4 (FXD)  
M19A4 (FLEX)  
M19A5 (FXD)  
M19A6

INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL .005  
FRACTIONAL  $\frac{1}{64}$   
ANGULAR  $2^\circ$

DRAFTSMAN

W.C.O.

TRACER

L.R.E.

LDG DRAFTSMAN

CHECKER

L.S.C.

CHIEF DRAFTSMAN

SUBMITTED:

A.M. ROE

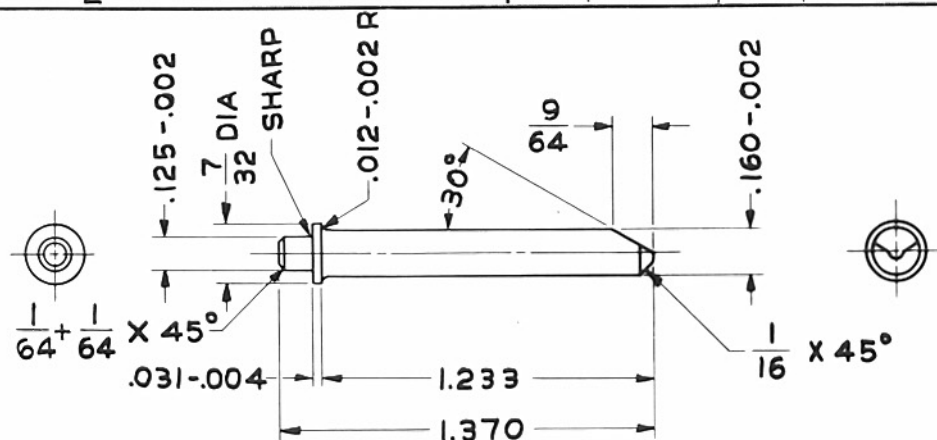
ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

Walter Ackerman

ORD. DEPT., U. S. A.

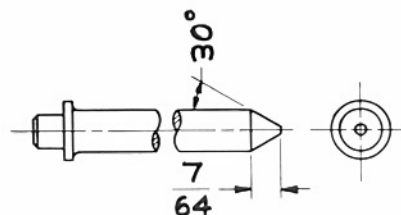
ORDNANCE DEPT., U. S. A.

**PIN, SEAR SPRING**

DRILL ROD

FINISH  $\frac{125}{\sqrt{}}$ 

5020577



ALTERNATIVE METHOD  
OF MANUFACTURE

WAS A20577

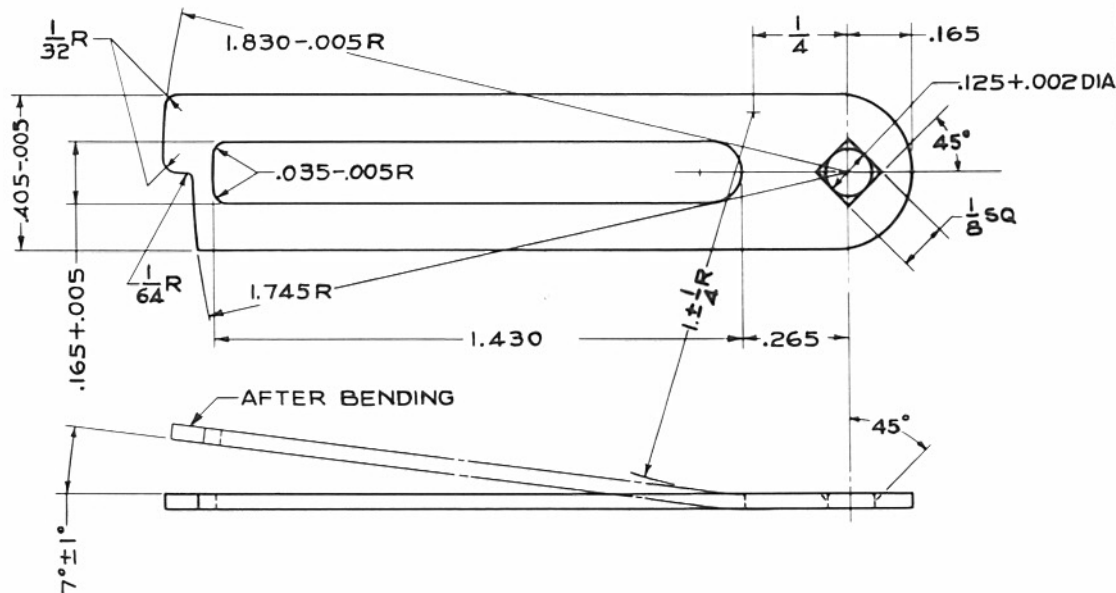
SCALE  $\frac{2}{1}$ 

A 5020577

MADE AT ROCK ISLAND ARSENAL

HEAT TREAT

NOTE:  
THE  $\frac{1}{8}$ " SQ X 45° CHAMFER ON UPPER EDGE OF HOLE  
MAY BE OMITTED WHEN ALTERNATIVE METHOD OF  
MANUFACTURE FOR A5020577 IS USED.



**SPRING, SEAR** (6017485)  
SPRING STEEL WDI095  
 NO. 19 (.0418) U.S. GAGE THICK  
 FINISH 125

SCALE  $\frac{4}{1}$  B 6017485 WAS B17485

A73-77

13 5-10-48

B6131265

30 BMG  
M17A1(WC)  
M19A4(FXD)  
M19A4(FLEX)  
M19A5(FXD)  
M19A6

DO NOT INSCRIBE PART NO.

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED  
DECIMAL  $\pm .005$   
FRACTIONAL  $\pm 1/64$   
ANGULAR  $\pm 5^\circ$

DRAFTSMAN C.S.S.	TRACER E.B.	L'D'S DRAFTSMAN
CHEF S.C.	O.D.	CHIEF DRAFTSMAN

SUBMITTED:

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:-

Walter Ackerman  
ORD. DEPT., U. S.

ORDNANCE DEPT., U. S.

**B6017485**



HEAT TREATMENT AND FINAL FINISH

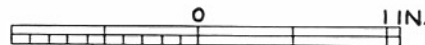
TYPE II FINISH, CLASS B

SPRING-B6017485

PIN-A5020577

SPRING, SEAR, ASSEMBLY

6131265

PHYSICAL  
PROPERTIES

Y. P.
T. S.
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JUNE 1, 1931

## REVISIONS

11 5-10-48

## DRG. PERTAINS TO

51-10-1	.30 BMG M17A1 (WC)
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INSCRIBE PART NO.  
DO NOT

TOLERANCE ON DIMENSIONS  
NOT OTHERWISE SPECIFIED

DECIMAL: —  
FRACTIONAL: —  
ANGULAR: —

DRAFTSMAN E.C.P.	TRACER A.V.C.	L.D.D. DRAFTSMAN
CHECKER G.D.	CHECKER D.D.	CHIEF DRAFTSMAN

SUBMITTED:

ORD. DEPT., U. S. A.

APPROVED BY ORDER OF THE CHIEF  
OF ORDNANCE:

ORD. DEPT., U. S. A.

ORDNANCE DEPT., U. S. A.

WAS B131265

B 6131265

B6131265